CHILD DEVELOPMENT AND THE CURRICULUM

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CHILD DEVELOPMENT AND THE CURRICULUM

THE HORACE MANN-LINCOLN INSTITUTE OF SCHOOL EXPERIMENTATION
TEACHERS COLLEGE · COLUMBIA UNIVERSITY

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CHILD DEVELOPMENT AND THE CURRICULUM

By Arthur T. Jersild

IN COLLABORATION WITH

Mary E. Chayer
Charlotte Fehlman
Gertrude Hildreth
Marian Young

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FOREWORD

In 1943 a major research project on the curriculum of childhood and youth education was planned by the staff of the Horace Mann-Lincoln Institute of School Experimentation. One of the first steps, preliminary to undertaking actual school experimentation, was the decision to make a critical appraisal of child development materials from the standpoint of their contribution to the curriculum. Not only was it believed that an understanding of child growth and development is basic to sound curriculum planning, but also it was known that much research in the area is not in such form as to be easily available to teachers and other curriculum workers. Further, major deficiencies in the child development research information needed for curriculum improvement have not been clearly outlined. A committee of Institute staff members, under the chairmanship of Arthur T. Jersild, was accordingly asked to undertake the task of analyzing and interpreting the child development field as it relates to the curriculum.

The work of this committee was paralleled by that of another group, under the chairmanship of George S. Counts, on the social bases of the curriculum, which has focused on the relation of education to the nature and fortunes of our society. This latter committee has made a considered analysis of the traditional American beliefs and values, has described our heritage and characteristics as a nation, has studied the frontiers of our industrial civilization including the tensions and conflicts which we face, and has sketched in broad outline the kind of education needed for America in an industrial age. When published, the report on the social bases of education will stand as a companion volume to this one on child development and the curriculum.

Within a year of its appointment, the committee on implications of child development for the curriculum reported in preliminary form to the Associated Schools of the Institute in order that they might have the guidance of these materials in developing areas for experimentation and might give suggestions for the revision of the report which would increase its general usefulness. The Associated Schools presented many helpful suggestions which have been incorporated in the volume.

These materials on child development will be of great value to teachers, principals, supervisors, and curriculum directors in programs of in-service education and curriculum improvement. Pre-service and in-service college and university courses in child development and in curriculum improvement will find this volume a highly useful and interpretive summary.

Gordon N. Mackenzie
EXECUTIVE OFFICER
HORACE MANN-LINCOLN INSTITUTE
OF SCHOOL EXPERIMENTATION

PREFACE

This volume deals with implications of the child development point of view and of research findings in the field of child development. The first chapter discusses the meaning of the child development approach. The second sets forth a number of principles of development that have implications for education. Four chapters follow that deal, respectively, with the infant, the preschool child, the elementary school child, and the adolescent.

These chapters sketch some of the major characteristics of children at various maturity levels. The purpose is to show growth trends, goals, or objectives toward which the organism is striving, developmental tendencies and forms of behavior that are prominent at various levels as the child moves from early infancy to adulthood. These chapters also indicate factors that must be taken into account if the educational program is to be adapted to the needs and potentialities of growing children. In the process there is frequent occasion for pointing out needed research from the developmental angle, and needed experimentation on the educational side.

The inclusion of chapters on the infant and the preschool child has been deliberate. It is true that a large proportion of teachers are directly concerned only with children of elementary or high school years. But to understand children at these levels it is necessary to have an understanding of earlier development. The more important goals of education can be achieved only by taking into account, to a greater extent than has been customary, forces that are shaping a child's personality long before the age when children usually go to school.

A preliminary draft of this work, in mimeographed form, was submitted, in the fall of 1944 to the schools associated with the Horace Mann-Lincoln Institute of School Experimentation, with a request for criticism. The response was most generous. Many changes recommended by the teachers, administrators, and other readers have been incorporated into the present draft. In keeping with the recommendations of these readers, the present version retains the same chapters and the same sequence of chapters, and is approximately the same length as the preliminary draft.

Throughout this volume we have drawn heavily upon the literature in child development. Somewhat reluctantly we have followed a policy of not citing, in the context, each specific study upon which the discussion is based. At the end of the book we have listed writings from which findings and generalizations have been drawn. These are arranged chapter by chapter. The author index contains references to the pages on which the publications of the various authors are specifically named and also to the pages in the text that contain material that is based directly or indirectly upon the work of various authors.

The writer is grateful to all teachers and administrators in the Associated Schools of the Horace Mann-Lincoln Institute who read and commented upon the first draft. He wishes to thank the persons in the Associated Schools who aided in securing these reactions, including Genevieve Bowen of Bucks County, Pennsylvania; H. P. Harding of Charlotte, North Carolina; Maurice R. Ahrens of Denver, Colorado; Roscoe V. Shores of Kansas City, Missouri; Fern Schneider of Montgomery County, Maryland; David W. Peters of Radford College, Radford, Virginia; D. C. Rucker of Springfield, Missouri; Deborah Partridge of Tuskegee, Alabama; D. F. Folger of West Georgia College, Genola, Georgia; Donald F. Cottrell of the Horace Mann-Lincoln School, New York City.

A great many other persons have given aid and comfort in connection with the writing of this book. All these shall be nameless save Ruth Jacobson Tasch, who prepared the bibliography and author index, read proof, and kept a friendly eye on the volume as it went through the throes of getting into print.

Arthur T. Jersild

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CHILD DEVELOPMENT AND THE CURRICULUM

CHAPTER I

THE CHILD DEVELOPMENT APPROACH TO THE CURRICULUM

The child development approach to the curriculum means an effort to apply to the education of children the lessons learned from the study of children themselves. Research in child development has provided many findings which have implications for education, as will be noted in later chapters. But the child development approach does not represent merely a collection of facts. It represents also a point of view.

Basic to this point of view is a spirit of inquiry—a desire to learn about the ways of children. This means an effort to obtain knowledge, to test this knowledge by repeated study, to state the findings in clear terms so that others can understand and, if they so desire, repeat the study.

RESPECT FOR THE PROCESS OF GROWTH

With this spirit of inquiry goes an attitude of respect for children at all stages of their growth. This respect is built on the view that the experiences which a child undergoes at any stage of his growth, whether he be a newborn baby, a toddler, a school-age youngster, or an adolescent, are as important to him at his level of maturity as are experiences which befall an adult.

The child development approach assumes the child's right to be a child. Nature has decreed that a human creature shall be a child a long time before he becomes a man. This period of childhood is also the period which fathers the man that is to be. One of the greatest temptations which confront an adult in dealing with a child is to try to tamper with the process of the child's own development. Such tampering may take many forms, ranging from efforts to keep the child from growing up to impatient efforts to make him grow up faster than his own nature permits.

Respect for the child as a growing person who usually tries to do the best he can with what he has at each level of his growth is not founded on sentiment or an impulse to idealize childhood. Nor does it mean that we regard the child as an anointed creature who has rights above all others; for the world in which the child lives is peopled by many others, and just as he has rights, so do his peers and his elders. Again, respect for the child does not imply disrespect for the child's elders. It does not imply that the child is always right and that his parents or his teachers are wrong. An essential feature of the child's world is the support and guidance which his elders can provide by virtue of their greater strength and knowledge.

CONCERN WITH ALL ASPECTS OF HUMAN PERSONALITY

The child development approach is many-sided. It sees the child not simply as a mind to be trained, or a body to be kept in good repair, or a bundle of emotions to be studied. Rather, it sees the child as embodying many characteristics which interlock and interact upon one another in countless ways.

By reason of his concern about the interplay of many forces in human growth and behavior, the student of child development recognizes, for example, that it is important for the child to master intellectual skills, such as reading and arithmetic. But he recognizes also the importance of the child's mastery of everyday manual and bodily skills. He further emphasizes the importance of the child's emotional well-being, which not only is crucial to his happiness as a person but also plays a decisive role in determining his moral conduct and his behavior as a citizen.

THE ECLECTIC APPROACH

While thus sensitive to the many aspects of human personality, the child development approach is not wedded to any militant theory in science, psychology, or education. The factors which go into the making of a personality are too complex and too varied to permit a sectarian approach. The student of child development recognizes the force of heredity. He also accepts the facts concerning the importance of the environment. The student of child development regards various contending schools in psychology, various philosophies of education, various "isms" in the political and social sciences as eddies in a widening stream of learning. Each is acknowledged, not for its own sake, but for what it has to offer, either as an aid to understanding or as a guide to practice.

CONCERN ABOUT THE POTENTIALITIES OF GROWTH

Like the conservationist who winces at the ruin and wastage of natural resources, the student of child development is constantly reminded of factors which point to neglect, waste, and destruction in the handling of human resources. In the population at large he sees many now ailing who might have been well. Large numbers of children move into adulthood with bodily defects which might have been prevented or remedied or partially relieved if what science can offer had been available to them. Again, large numbers of children move into adulthood as psychological misfits. Many of these were not born to be misfits but were made so by circumstances in the control of human hands.

Nor is the story of preventable human discomfort written simply in the lives of those who have been maimed in body or in spirit. Quite as moving is the testimony of what is as against what possibly might be in the lives of children who do not fall by the wayside but falter in their journey. In viewing these, child development has no panacea or counsel of perfection. But the student of child development at least asks what might be done by way of human engineering, based upon scientific study, to eliminate or prevent many seeming lacks and dislocations.

He sees many children who keep the pace, but against difficult odds by reason of what appears to be poor nutrition. He sees large areas of frustration and dislocation within the school: the high percentage of children who have difficulty in the first grade; the large number who go unwillingly to school; the high percentage of drop-outs in many systems; the lack of educational provisions for all children in many sections of the country; the problems which arise if "slow" pupils are promoted and the problems which remain if they are kept behind; the supreme boredom of large numbers of bright pupils; the frustration and repeated experience of failure of the dull; the dislocation in late adolescence between children's striving for independence and the opportunities offered them to stand on their own feet.

Again, he sees lack of cultivation of developmental potentialities in the sphere of social and emotional behavior and in more specific areas, such as art, music, manual and other motor skills that are valuable both for work and for play. Further, he raises questions concerning the allocation of the school's effort and budget, the expenditure of time for learnings which might possibly be gained with more zest and in less time if postponed to a later stage of maturity, the expenditure of time for some learnings that the child will acquire anyhow at the expense of more timely and valuable undertakings.

THE SCOPE OF EDUCATION

The child development approach views education as coextensive with life. Education represents everything in the environment from which the child can learn or to which he must adjust. The educational process begins at birth, if not before. Much of the child's education is deliberately planned or provided by adults, but even more comes through the child's countless contacts with people and with things. Every person with whom the child comes in contact is his teacher. Every stimulus to which he responds is a feature of the school of life in which he is reared.

THE IMPORTANCE OF PARENTS

The child's first teachers usually are his parents. What he learns from them through what they do, the care they provide, the instruction they supply, the example they set, is likely to have a far greater influence on him than any other educational agency with which he comes in contact as he grows older. By the time he reaches the nursery school age, and even more by the time he reaches school age, he is already a highly educated individual. Habits, skills, attitudes, modes of behavior which go into the making of what we call his temperament, character, and personality have been established. This does not mean, of course, that his ways are set for all time.

So the child, when he reaches the age when school people first deal with him, is in some respects a postgraduate, in others a freshman, in the university of life. The child development approach stresses both of these facts. On the one hand, it stresses the importance of the earliest formative years, which education cannot reach so readily through direct dealings with the child himself but must reach by way of the child's parents. For this reason, emphasis on parent education in one form or another is prominent in the child development approach. Parent education is conceived not simply as this or that scheme for direct instruction or advice to parents, but as the embodiment of all influences bearing on a child's life and ways as a future parent. The factors which influence a parent's dealings with a child are, of course, operating long before the status of parenthood is attained. Indeed, a baby is subject to influences which will have a bearing on his conduct when, many years later, he has children of his own.

THE SCHOOL ONE OF MANY EDUCATIONAL AGENCIES

Emphasis on the importance of parent education thus broadly defined does not, of course, rule out emphasis on the importance of schooling outside the home. This schooling assumes increasing importance as the child steadily is weaned from dependence upon parents and, with the years, moves farther and farther into the larger world outside the home.

The school represents an important feature of this larger world. Its function should be defined from the point of view of what, as one of many agencies, it is especially in a position to provide. There are many aspects of a child's life, including aspects of his physical care and his emotional upbringing, which the school will influence less directly than certain other agencies, notably the home. This still leaves the school with more opportunities than could ever be fully used.

The child development approach as applied to dealings with children in the school seeks to take account of findings with respect to what children are like at any given level, and knowledge concerning what is needed for the present and what will be valuable for the future. The aim is to help the child, so far as is practicable within a school setting, to achieve the optimum development of his powers, to adjust to his limitations, and to obtain a balanced diet for the nurture of the many aspects of his personality.

The child development approach in education takes account of both likenesses and differences between children. One of the most difficult practical problems confronting the educator is this problem of how to deal with individual differences. A good practical answer can be found only through a systematic study of children themselves, combined with an experimental approach in the school situation.

THE SCIENTIFIC APPROACH TO EDUCATION

The child development approach requires a scientific study not only of children *as children*, but also of children *as learners*, in a school situation. Findings from a study of children's growth and behavior will indicate how a school program should be arranged. But such findings will not *per se* tell how the practical details of the school's job may best be carried out. This answer can be found only in experimentation. Such experimentation calls for scientific inquiry rather than simply a good-hearted attempt to play this or that hunch in the hope that some good will come of it. It is in this task that the research worker in child development and the educator join hands as scientific workers in an educational cause.

THE ROLE OF THE TEACHER

When the student of child development thus emphasizes the scientific approach he does not thereby set himself up as a person who looks upon children as guinea pigs. He recognizes the importance of the human touch in practical dealings with children. Similarly, emphasis on scientific experimentation in education does not minimize the importance of the teacher as a person. Indeed, the qualities of the teacher as a person constitute the most important single factor in any school situation.

The following chapters will deal more directly with characteristics of human development. Chapter II will consider principles which apply at various maturity levels.[1]

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[1] Bibliographies for the various chapters assembled at the end of the book.

CHAPTER II

PRINCIPLES OF CHILD DEVELOPMENT AS APPLIED TO THE CURRICULUM

Education should be geared to the course of human development. What we try to accomplish through education at any growth level should be in keeping with the individual's capacities and potentialities at that level. Findings with respect to growth and behavior should serve as guides to practice. In order properly to apply the findings it is necessary also to take note of principles of development which emerge when many findings are viewed in relation to each other and to consider the bearing of these principles on the educational program.

This chapter first sets forth certain assumptions and then offers a statement of principles which provide a general orientation for bringing the offerings of child development to bear on education. All these principles are supported by research findings, but not to the same degree. Some, while pointing the way toward educational policies, also reveal gaps and lacks in our knowledge of human development.

SOME GENERAL ASSUMPTIONS

EDUCATION INVOLVES CHOICE

At all age levels beyond earliest infancy, the content of any educational program represents a choice from among many alternatives. The school curriculum, no matter how liberal it may be, has to be selective. We are making choices for the child when we ask him to come to school rather than stay at home. As soon as we begin to offer anything to him in school we are, to a degree, barring him from other things. We cannot teach everything at one time. Choices are necessary. This leads to a second general assumption.

CHOICES SHOULD BE IN LINE WITH CHILD GROWTH

Our choices at any growth level will be wisest if they are in keeping with the child's capacities and potentialities at that level and the forms of behavior dominant at that particular period of life. The goals of education should be in line with the goals of development—the capacities, adaptations to the environment, and modes of behavior which the organism is in process of establishing through the various periods of its growth.

Development means a process of becoming. It embraces changes which begin at the time of conception and continue until the moment of death. Although the process is continuous, it is possible to define landmarks and milestones along the way. The child now is in the process of learning to walk, later he reaches a level where he can learn to ride a bicycle; he now is in the process of forming his earliest fleeting social contacts with other children, later he reaches a stage where he is capable of sustained and complicated teamwork. His mental operations at first are limited to the immediate environment, later they embrace the past and the future and deal with what is remote as well as near in time and space.

The assumption that what we try to do in education must be in keeping with the child's own growth involves the further assumption that this is the only efficient way to proceed. Whether our aim is to prepare a child for a life of crime or of saintliness, a life of cutthroat competition or friendly co-operation, a life in a horse-and-buggy era or in a machine age, our efforts will best be repaid if what we offer him at any period in the growth span is adapted to his capabilities at that stage.

CONCEPTS OF HUMAN POTENTIALITIES CHANGE

The claim that education should be suited to the course of development does not, however, imply that we can find a complete blueprint in a study of what research now reveals concerning the characteristics of children. In many areas the research is inadequate. Further, forces other than those within the child himself come into play. The characteristics of children, the way they behave, the attitudes, habits, and skills they possess, will be influenced by what is expected of them and the opportunities which come their way. For example, in a community where everyone swims it is very likely that more children will swim at an earlier age than in a community that has no facilities for swimming. A young child in a bilingual environment will learn two languages almost as well as a child in a monolingual environment learns one.

Many children of today, surrounded by automobiles, radios, electric motors, and other mechanical devices, acquire skill with tools and machines at a far earlier age than might have been predicted a generation ago. It is likely that many elementary school children of tomorrow will likewise acquire skills now reserved for adult experts. Similarly, in the intellectual sphere, through radio, telephotography, and motion pictures, the child of today obtains glimpses of a world that once was very remote. Long before he learns about geography in school his everyday environment brings to him, to a degree quite unknown when his elders were young children, impressions of distant people, places, and happenings. Some concepts and some forms of behavior will, of course, be influenced more than others by variations in the environment. But even so relatively stable a characteristic as physical height may be influenced by variations in diet and other factors.

In other words, we do not assume that we can at any time hitch education to developmental norms as though the latter were absolute. Children may possess many potentialities which have not been discovered because the culture in which they live does not call them forth. Again, by reason of cultural pressures, children may show capabilities or tendencies which represent development in one sphere at the cost of wholesome development in other areas. What we find at any one time is a product of the child's nature and his nurture.

This means that an educational program geared to child development will not be absolutely fixed, but in large measure will be experimental. Such a program will scale its opportunities and expectations in the light of the best that is known about child growth. But it will be on the alert for new insights into resources of child nature. It will be on guard against cultural pressures which are contrary to the best interests of children.

We now move from these general assumptions to examine a number of principles of child development that have implications for education.

PRINCIPLES OF DEVELOPMENT

LEVELS OF MATURITY

The outcome of normal development is increasing maturity. At any phase of his growth a child may be regarded as both a mature and an immature creature. The three-year-old is immature as compared with what he will be at a later time. But he is mature if he lives up to his possibilities of development as a three-year-old.

The educational program should be designed to help the child at any stage in his career to reach his potential level of maturity. This means that education must take into account the child's powers and capacities and the developmental tendencies prominent at this juncture of his growth.

LEARNING AND GROWTH

The development of behavior proceeds through the influence of two factors—learning and growth. We may define learning as any change in behavior which takes place by virtue, in part, of past experience. We may define growth as the biological changes which take place within the organism as the organism progresses toward maturity.

The effects of growth are most obvious in the physical sphere—a child gets bigger and heavier. They are not so directly obvious in the sphere of behavior. Various studies indicate, however, that the factor of growth operates on the processes underlying mental, emotional, and other forms of behavior. In connection with many changes in behavior which take place in the course of development, it is impossible to tell precisely how much of the change is due to growth and how much to learning. The effects of these two factors interact and are closely interwoven. But findings from many fields indicate that many of the changes in what a child is able to do and strives to do come about by a process of ripening or inner growth. Regardless of the opportunities for learning which a child may have, this process of ripening requires time, varying with different performances.

DIRECTION AND FORM OF DEVELOPMENT

The outcomes of changes during the course of development appear in many forms. As already indicated, the most obvious change is a change in size. A little body becomes a bigger body.

There is change also in the form of an increase in capacity. Muscles become stronger; reactions become more rapid. There is an increase in the power to concentrate. The mind can master increasingly complex and difficult tasks.

Some changes, like the foregoing, take place largely through an increase in what is already there. Other changes occur through a process of alteration or refinement or through the emergence of something relatively new. Again, some changes, notably in the form of complex skills, may be derived from the organization of a number of operations into a larger pattern.

DEVELOPMENTAL PACE

The pace of development tends to be most rapid at its starting point and to slow down with the passage of time. For example, in the period from conception to the time of birth physical growth proceeds at a staggering rate as compared with later periods. Gains in mental growth and in motor control are more rapid during the first year than the second and during the second year than the third, and so on. There are certain exceptions to this broad rule, notably at the approach of adolescence.

In connection with this characteristic of growth may be considered a further proposition, which has not been established as a scientific principle but which very likely is true, namely: the faster the rate of change in human development the greater the opportunity to influence the outcome. To the extent that this proposition is true, the greater becomes the educational significance attached to the early years of a child's life.

THE CONCEPT OF DEVELOPMENTAL PRE-EMINENCE

Although development is continuous, certain of its aspects are pre-eminent at various periods in the life span. There are times when the energies of the individual concentrate on the establishment of a given feature of his physical make-up or of his behavior repertory.

As pointed out earlier, we begin to make choices for the child as soon as we begin to educate him. When we ask what education should choose to emphasize at various periods in the child's career, we should also ask where is the present emphasis in his own development. There are gaps in the scientific data necessary for a complete answer to these questions. Even so, from the point of view of educational implications this concept of pre-eminence is highly important.

When we look to the child we can see many illustrations of this tendency toward emphasis now on one feature of development, now on another, in the process of growth. We see it when the young child's energies seem to center for a time on the business of learning to walk alone. For a season other features of his development may appear to be at a standstill or even to lose ground. We see this pre-eminence to varying degrees when the young child in his social development passes through a period of resistance and negativism which subsequently subsides. Similarly, we see it when a child announces his discovery of the meaning of how, when, where, why, and who with an outpouring of questions.

We see it, although not so clearly marked, in the child's preoccupation with the interests of the group or team after the middle elementary school years, and in his reaching out for an orientation in the world of affairs outside his home. We can discern it also in broad outlines when we compare the tendency of young children to be physically active with the more sedentary tendencies in late adolescence and thereafter.

We can discern it notably in adolescence when a child's life is dominated to a large degree by the bodily changes which take place with the onset of puberty and by the psychological repercussions of these changes. We see it also in later adolescence, when vocational interests and other preoccupations concerning the future have an urgency they did not possess before.

In none of these illustrations is it implied that the concern in question is the exclusive concern. It also is true that many of the outlines of the phenomenon of pre-eminence are obscure. With added maturity beyond the earliest childhood years, the scope of children's activities widens so much that it is sometimes difficult to tell what are the foremost concerns. This may mean that the concept has only limited application.

On the other hand, it may mean that our research has not fully explored the matter.

It is a matter of interest to note that related to the concept of pre-eminence is the phenomenon of "wholeheartedness and gradation."* In the process of entering upon a new or changed mode of behavior, the child may for a time seem to overdo or to exaggerate. From the adult point of view his "all out" absorption is quite excessive. In the normal process of development, however, his behavior becomes less all-absorbing or comes to fit as an integral feature into a larger behavior system. Walking, which for a while absorbed the child as though this were what he had come into the world to do, eventually moves from the center of the stage as the child goes on to ventures in which walking is simply a means of getting from one place to another. Illustrations of progression from a wholehearted to a graded response can be noted in the child's emotional behavior. They can also be found in his social and intellectual development, as, for example, in his apparent overdoing of competitiveness for a time, and in the plunge he takes into fantasy and make-believe when the development of his imagination has opened up this world to him.

This phenomenon of wholeheartedness is usually more evident in the child's life out of school than in his life at school. The confinement imposed by the school, the presence of adult teachers, and the leveling influence of being with many children whose enthusiasms at the moment may not be synchronized with his own have an inhibiting or moderating effect.

INDIGENOUS MOTIVATION AS A FEATURE OF GROWING ABILITY

Associated with the development of a capacity or power is the impulse to use that capacity or power. An organ or set of organs that *can* function will, so to speak, strive to function. At appropriate stages of his motor development, for example, the child creeps, runs, climbs, even if there are no ulterior ends to lure him on.

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*The term is from H. L. Hollingworth, who uses this characterization to describe changes which take place in emotional development.

This is also evident in connection with the development of the capacity for the intellectual operations which distinguish man from the lower animals. In due time the youngster goes through the various processes of language development; he babbles and articulates and "practices" vocalizations and verbalizations even when there is no one immediately present with whom he can communicate. With the development of perception and discrimination, he explores his visual, tactual, auditory, and gustatory environment. At an early age he shows an appetite for intellectual things, much as he shows an appetite for using his limbs or for satisfying his desire for food, or, at a later stage, his cravings of a sexual nature.

In like manner, he exercises capacities and growing potentialities in the social sphere. He explores the social environment; he seeks to make contacts with other persons; he experiments with different ways of dealing with people. Similarly, he seeks emotional experiences; he will, for example, enter into situations which involve an element of fear in his play and in his listening to, say, an exciting radio program.

According to this principle, motivation is co-extensive with the full repertory of a child's physical needs and his capacities in the intellectual, motor, social, and emotional spheres. This does not, of course, mean that a child who possesses a given potential ability will forthwith take all steps necessary to bring this ability to fruition. Various opportunities and pressures, and the competition of other activities, come into play. The discrepancy between what a person is able to do and what he might be able to do is only too familiar.

This principle of spontaneous use presents a challenge in all the enterprises at school designed to help the child to learn. According to this principle, the normal child has not only the capacity to learn, but also an appetite for learning. Given the right things to learn, he will go gladly to school (subject always to the reservation that even the best school situation must compete with learning situations which an enterprising child can find outside school). As against this expectation, we have the familiar spectacle of children "creeping like snail unwillingly to school," or of children beyond statutory school age leaving school as soon as they are free to do so, even though there still is much they yet might learn.

We have, then, this situation: while education should count upon the child's impulse to use growing capacities as an integral feature of his development, it is the responsibility of education, increasingly as the child grows older, to find the best channels through which such impulses can be expressed. In exercising this responsibility, educators must weigh particular interests against larger aspects of the child's present and future welfare. In so doing, they can also properly capitalize on the fact that where there is potential ability there is also potential interest, that a child can learn to like to do anything that he is able to do and that offers a continuing challenge to his energies.

THE PRINCIPLE OF ANTICIPATION

Throughout the growth span the process of development constantly involves preparation for the future. The changes which occur in the course of growth not only have a bearing on the present but also establish the foundation for developments that lie ahead.

This principle can best be illustrated if we look backward from the late adolescent stage of growth. The youth is now heading toward the achievement of certain objectives which will mark him as a competent adult. Such competence has many components. One component is the achievement of a degree of physical and economic self-support. This competence has been in the making almost from the time of birth through the acquisition of countless modes of behavior which enable the child, with advancing years, more and more to stand on his own feet and to pull his own load. Another component is psychological self-support. Competence in this area has been in the process of development from the time, in early childhood, when the youngster first began to form opinions and to make decisions of his own. It has also been in the making in the emotional sphere as the child has moved from the helpless dependence and volatility of the infant to the degree of fortitude and control required of a person who is no longer a child but is capable of begetting children of his own.

The principle of anticipation has a bearing on the question of how far we should go in educating for the future as distinguished from the present. Certain practices in education definitely have reference to the future. Children have been taught how to compute compound interest, for example, on hypothetical savings which they might, with good luck, possess some ten or twenty years in the future. Much of the emphasis on subject matter in the schools has been predicated on possible future use. From time to time in the history of education there have been strong reactions against such practices.

However, while it is proper to question the particular things which children have been called upon to learn for future use, it is quite in keeping with the course of development to keep in mind the child's future activities and needs. The child himself is heading toward the future. As we find him at any given time, certain features in his make-up are manifest, but others are in process of becoming. Moreover, much that holds the center of the stage at any moment is the foundation for, or becomes an integral feature of, a future mode of life. A form of education planned solely with reference to the present would be out of gear with development and would do the child a disservice. This holds true all the more by reason of the fact, as noted elsewhere, that what the school offers must necessarily represent a choice from a vast array of alternatives.

Granted such room for selection, it will be wisest, other things being equal, to choose activities which not only are suited to the child's present level of development, but which also will be useful at a later level of development. The demands of present significance and of future use need not be contradictory. In many areas they are complementary.

VICARIOUS EXTENSION OF EXPERIENCE

From an early age the child is able to encompass experiences reaching far beyond conditions with which he has physical contact. His mind can traverse distances never covered by his legs. It can manipulate things never touched by his hands. This principle is rather obvious, and yet in the light of some recent emphases in education it merits consideration.

In many areas of learning it is possible to make progress only through direct experience with the physical environment. One cannot learn to ride a bicycle simply by being told how, or by watching. However, there is much that a person can learn and can use through the medium of ideas rather than of concrete things. If a child's education were limited only to matters with which he had direct personal experience, his mental life would indeed be poverty-stricken. It is not necessary that mental work always be accompanied by leg work. Granted some preliminary development of a concept of animals, a child can learn much that is interesting about elephants without actually seeing a real one. To be sure, there will be more meaning and relish in the child's concept of an elephant after he has seen a real one, but to limit his knowledge of animals to what he can verify at the zoo or to deny him knowledge about China, for instance, unless he is able to go there and see for himself would be a denial of human capabilities.

This does not mean that we should load the curriculum with abstractions. As a matter of fact, an educational program geared to the child's development would lay considerably less stress on the learning of abstractions than now prevails in most progressive and formal schools, and would give considerably more stress to learnings that promote his emotional development, his motor skills, and his competence in dealing with everyday practical problems. But while stressing these matters relatively more than is now being done, we would still recognize that education should not be restricted to what the child can cover through trips, excursions, and the handling of tangible things.

"LAYING BY" OR SHEDDING AS A FEATURE OF DEVELOPMENT

Development takes place not merely through the process of accretion, or the refinement of earlier forms of behavior, or through the emergence of new and different forms of behavior, but also through the sloughing off of features which were appropriate to an earlier day but are no longer useful. Some modes of behavior recede or are supplanted by other forms of behavior. Other modes of behavior are not actually lost, but seem largely to disappear through a process of modification and refinement.

DEVELOPMENTAL REVISION OF HABITS

Ordinarily we assume that the repetition of behavior which serves a purpose and which brings satisfying results will lead to the firm establishment of a habit. This does not always hold in the development of the child. Repetition of activities appropriate to a given level of maturity does not, in itself, establish habits that will be carried over to a later level of maturity. Indeed, if no unwholesome factors intervene, the child of his own accord will revise many modes of behavior that have prevailed for a time. For example, the young infant on a "self-demand" feeding schedule will, for some time, be fed upward to eight or nine times every twenty-four hours. This, however, does not establish a continuing demand to be fed according to this schedule. As a baby grows older, there is an increase in his capacity for food intake at any one feeding. Steadily from week to week, albeit perhaps erratically from day to day, there also is a lengthening of the periods during which he sleeps without waking, and a corresponding lengthening of the periods during which he is awake. Coincidentally with this, through a process of elimination and merger, there is a decline in the number of feedings which he demands.

A corresponding phenomenon can be found in connection with various aspects of the child's motor, social, emotional, and intellectual behavior. Even if no strong repressive measures are brought to bear, the child who at early preschool age did much hitting and snatching in his encounters with other children will with the passage of time substitute language more and more for physical techniques of conflict. The child who at a certain stage of his growth immersed himself in make-believe will not, simply as a function of the time devoted to make-believe, become permanently addicted to fantasy as he matures. The youngster who, to varying degrees at various stages of his growth, shows a short attention span in many of his enterprises will not, simply through the fact of having frequently flitted from one occupation to another, find it impossible to acquire good habits of concentration.

We could multiply examples of this principle. Parents and teachers would be spared much fretting, and children, on their side, would be spared from many repressive measures, if it were more generally recognized that many forms of behavior exhibited at a given stage of growth will not be perpetuated simply by frequent use. Granted his own good time, the child himself may become more intolerant of some of his earlier practices than even his elders had been. We see this illustrated in his radio interests. For a time many youngsters are enthralled by programs which adults consider trashy or inane.

A few years later the same children criticize and disparage these very programs.

While general recognition of this principle in the many practical details of child rearing would add to the comfort both of children and of their elders, it is also true that the principle leaves many questions unanswered. We need considerably more systematic research to tell us which forms of behavior may be regarded as appropriate to a given stage of growth and which ones the child himself will abandon or modify as he matures. Correspondingly, how can we identify "immature" forms of behavior that are likely to be established as lasting habits unless corrective measures are brought to bear?

Answers to these questions would solve a host of problems in the rearing of children at home and in the instruction of children at school. Among the school subjects, spelling offers a good example. A child usually is able to communicate much in writing before his spelling is correct. A fourth grader, for example, may indicate in writing the names of twelve favorite radio programs with sufficient approximation for an adult to identify each even though the name of not a single program is correctly spelled. The same youngster will, with the passage of time, come to spell correctly many of these words even though the words have not been singled out and separately taught. On the other hand, there are some children who will continue into adult years to be confused about their spelling. In order to avoid this possibility, some teachers treat spelling as an end in itself. By so doing, they may devote time and energy to the spelling of many words which most youngsters eventually, and apparently without special effort, will learn to spell anyhow. Unfortunately, the question of how far we can trust the child to supplant earlier repetitions of incorrect spelling with the discovery of the correct spelling is one requiring further study.

Spelling offers a convenient example; but we could raise similar questions with respect to almost every feature of the conventional school program, not only as regards the learning of specific areas of subject matter, but also as regards certain larger objectives, such as improvement in capacity for sustained concentration, the establishment of good intellectual work habits, and the like.

INTERACTION BETWEEN VARIOUS ASPECTS OF GROWTH

While various components of an individual's make-up have a developmental course of their own and proceed with a certain degree of independence, it is important to take account of ways in which the different components interact upon one another. Motor development, for example, takes a course which in many respects is independent of intellectual, social, and emotional development, yet it interlocks with these other features in vital ways. Thus, motor development plays an important role as a vehicle for social development. Throughout childhood, and especially in the preschool and elementary school years, a child's social contacts with his peers are to a large extent made by way of common motor activities. Again, a child's motor development will have an important bearing upon emotional features of his behavior. The child who is backward in his motor skills will, for example, have occasion to be angry or afraid in the face of obstacles or threats which an abler child would handle unemotionally.

In like manner intellectual operations interlock with the development of social behavior. During early childhood make-believe activities, for example, play an important role in children's play and other social relations. The activities and interests involved in children's social dealings with one another may, in their turn, have a significant bearing upon a child's intellectual occupations, his motor skills, and his acquisition of what his peers and elders regard as "mature" forms of emotional behavior. Similarly, disturbances in the child's emotional life may interfere with his mental operations and with his physical functions.

What we do in education should be chosen with an eye to these interlocking relationships. What we provide for helping children to build competence in various motor activities, for example, is not simply an investment in healthy exercise or handy skills. It is also an investment in social and emotional adjustment. The child who is helped to become a good third baseman in a ball game may thereby reach first base in his efforts to be socially acceptable to other children.

THE PLAY OF COMPLEMENTARY AND POTENTIALLY CONFLICTING FORCES

From the time of birth the child shows motives which, when viewed in isolation, seem to be opposed or conflicting. When viewed in larger perspective, however, they represent the play of forces which complement and support each other.

Dependence—Independence. At birth and throughout ensuing years the child is a highly dependent creature. Also, practically from the moment of birth he is striving for independence. On the side of dependence there is the fact that his very survival from day to day during early infancy hinges upon the care others give him. Along with his helplessness he exhibits with the passing years a desire not only for physical support but for psychological support. He seeks affection, he wants to feel that he belongs. This desire for emotional acceptance by others, notably his parents, expresses itself in various ways and with changing degrees of intensity as the youngster matures. There is a gradual weaning from emotional dependence upon his parents and other adults, just as there is a weaning from physical dependence. But throughout the growth span this dependence persists to a high degree even when the child's behavior seems to belie it.

The child who thus is dependent strives also, as indicated, to be independent. In various ways, as befits his growing abilities, he seeks to strike out for himself, to walk rather than be carried, to roam at large rather than be always under the parental eye, to do for himself, to initiate ventures of his own, to think for himself, and to act according to his own decision. There will be times when these two tendencies clash.

Self-Centered and "Outgoing" Tendencies. From the time of birth each normal person asserts his own interests and desires and learns increasingly to further and protect what he comes to regard as his individual rights. Also, almost from the time of birth the same creature defers to others in many ways. He has a tendency to give as well as to take. On the one hand, the child, at various stages of his growth, cries and fusses and seeks attention without regard for the convenience of others. He passes through periods of strong self-assertiveness. He competes, and in time he is much concerned about his own prestige. On the other hand, the same child, at an early age, goes out to others through manifestations of affection. With the passing of time he exhibits cooperation, sympathy, friendliness, loyalty. Behavior in both categories is normal and similarly a product of tendencies within the child himself and of forces in the environment in which he lives.

The issue between dependence and independence usually impinges more on the home than on the school. But the school also has a role to play. It must avoid both overprotection and rejection. It must help the child to acquire skills which enable him increasingly to stand on his own feet.

The issue between self-seeking and "outgoingness" has definite bearing both on the home and on the school. It is properly the function of the school to provide opportunities for the child to cultivate his capacities for sympathy and cooperation. It also is properly its function to provide opportunities for the child to learn how to assert himself. This means, among other matters, that the school must provide opportunities not only for cooperation but also for wholesome forms of competition. In the past there perhaps has been too much emphasis on competition. On the other hand, if schools tried to root out all conditions which might involve children in competition, the youngsters themselves would find ways to compete.

INDIVIDUALS DIFFER IN RATE, PATTERN, AND ULTIMATE LEVEL OF DEVELOPMENT

The well-known fact of individual differences carries a host of educational implications and raises many practical problems. On the one hand, education must take account of the norm; on the other, it must take account of deviations from the norm.

The idea of the norm, of what is "normal" or average or approximately to be expected, is an essential one whether we wish simply to describe children or wish to do something for them. It operates in our everyday dealings with children whether or not we happen to be familiar with the results of measurements of mental and physical traits. This point is rather obvious, yet it deserves mention; for some persons seem to deplore norms and standards as though these had been foisted upon education by the makers of tests and scales. Actually, the makers of devices for measuring children's performance have simply given more precise definition to standards which are constantly being applied in everyday life. It is only with some kind of standard in mind that we can speak of a child as being big or little for his age, or as being unusually clumsy or clever with his hands, or as having good command of language. We have something like a norm in mind when we buy a rattle rather than crayons for a six-months-old child. The idea of the norm, of a standard of comparison, is not only useful but indispensable as a tool in dealing with human nature.

Norms are useful also as a guide whenever we are called upon—which is often in daily life—to make the best provision we can for large numbers of children—whether it is buying desks for a school building or setting broad goals in the social studies for the sixth grade.

Norms not only are useful in defining approximately what may be expected at a given level of maturity in a given activity, but also provide a corrective against trying to push one aspect of a child's development at the expense of others. The fact that a group of children show high achievement in the three R's takes on a different meaning if it can be demonstrated that these same children are quite backward in the arts, in manual skills, or in the skills involved in getting along with other persons.

Just as norms are useful, so also they can be abused. To apply them as rigid standards would do an injustice to the individual child. To use them as though each child should conform to them would do violence to human nature. There are endless individual variations. Moreover, to regard norms or tentative norms now available as fixed and final would block experimentation.

Not only are there variations around the norm, but even when two children have the same rating they may prove to be different on closer inspection. Two boys may be of the same height, but one may have a relatively longer trunk, another relatively longer legs. They may earn the same score on an arithmetic achievement test, but one may have worked much harder than the other to earn it. Four children may be similarly backward in reading; the backwardness of one may be due mainly to poor habits, of another to poor mental ability, of another to poor vision, of another to emotional disturbance.

There is still another important kind of variation. At the present moment two eight-year-old children may be similar in ability, in reading for example, and yet this may be only a coincidence: if they had been tested six months earlier, or were to be examined six months later, they might be found to be quite different. Child A may be in process of gaining quite rapidly, while child B is moving at a slower pace. So, six months earlier B might have earned a higher score than A, but six months from now A may surpass B. At the present moment their achievement curves happen to be at the same point, but A's curve is rising rapidly while B's is ascending more slowly. According to a single test at this juncture the children are similar, whereas actually they are quite different.

In connection with individual differences there are certain subsidiary principles, some more obvious than others. One such principle is that differences between children are influenced both by heredity and by the environment. In the case of a great many human traits it is impossible to determine precisely what each of these two factors has contributed. But we know that many of the dissimilarities which meet the eye can be traced to the environment. It is apparent also that children would still differ in countless ways even if, by some magic, the external environment were made similar for all.

The fact that children differ raises many practical problems in education, as well as many questions of policy. The latter are quite difficult to solve if provisions for individual differences are considered in piecemeal fashion. In dealing, for example, with differences in the kind of mental ability involved in academic achievement we might ask whether we should "enrich" the program for the bright, or for the dull, by giving them extra or special teachers and extra equipment at the expense of the average, or whether the investment should be equal for all. This issue involves questions of social values that go beyond the study of child development.

Questions of policy with regard to individual differences appear in a somewhat different light when, in keeping with the child development approach, the school's program goes beyond the academic alone and concerns itself also with other areas of living and learning. Such a program is better geared to the fact of individual differences; for just as it is true that each child differs from others in any given ability or trait, so it also is true that there is variation within the child himself. He may stand high in mental ability but be near average in his motor abilities. There is, to be sure, a tendency for good qualities to go together: the child who is superior in one respect is more likely to be above than below average in other respects. But a great deal of unevenness is the rule. If children in a group were arranged from high to low according to one criterion, such as reading ability, and then according to other criteria, such as singing, drawing, crafts, and ability to get along with others, there would of course be many shifts in the line-up.

This fact that abilities are uneven means, incidentally, that individual differences may seem more marked when the development of children is evaluated in terms of a single characteristic rather than in terms of an aggregate of many characteristics. John has an IQ of 130 as compared with Jim's 100—in this particular a marked difference. But now add other features to the picture, such as height, weight, motor achievement, "social maturity," and the like. In some of these John again scores higher, in others Jim is ahead, in others the two boys are about the same. If we could add all features into a composite "developmental age," the difference between John and Jim would be smaller than the difference in IQ alone. From this standpoint, "Children viewed as wholes are more alike than children viewed as parts."[1]

It is only through a program embodying many activities and areas of learning that we can minister to the varied abilities of children. Such a program will provide also a wider range of incentives by giving recognition to a wider range of enterprises. Thus it may help to protect many children from becoming lopsided in their development. A child who already stands high in reading, for example, may profit much more by learning to play a musical instrument or

[1] Quoted from W. C. Olson. See reference in bibliography for Chapter II.

by acquiring certain manual skills than by adding to his already high level of achievement in reading. The bright elementary school child may profit more from learning how to get along with others in non-academic pursuits than by adding another chapter to his already brilliant record as a scholar. Of course, to achieve this outcome it is necessary that the school program not only have many things to offer but also be as flexible as is practicable for the individual child.

EARLY ESTABLISHMENT OF BASIC FEATURES OF PERSONALITY

Characteristics and qualities which distinguish each human being from all others, and which go into the making of what we call personality, are manifest in early infancy. They tend to show a high degree of persistence and consistency with increasing age.

This does not mean, of course, that a person's ways are "set" or have "jelled" once and for all at any particular stage of his growth. Changes come about through impact with the environment at all ages. An individual's characteristics are not fully predetermined either by heredity or by events which happen during the first few months or the first year or two of life. But the characteristics which distinguish this creature from that are not at all like putty in the hands of circumstance. Not only is it true that dominant trends in what we call an individual's personality appear early and tend to persist, but it is also true that modifications occurring with the passage of time will be relative to what was already there. Changes will represent primarily a building up or a modification of traits rather than the implantation of something that is new or that is different from or foreign to the individual's earlier make-up.

Educationally, this principle carries with it the well-known injunction that we should respect the unique personality of each individual child. It also implies that our concept of what is appropriate, what makes for an "integrated personality," should take account not only of norms derived from a study of large numbers, but also of what is most fitting from the point of view of the individual child. Thus, while we say that a child should become "socialized," we recognize that a youngster with a certain cluster of abilities and inclinations is doing very well even if he is much less gregarious than some of the other children in his group.

READINESS

The concept of readiness represents an educational approach rather than a principle of development. It raises the question of the timeliness of what we wish to teach in the light of the child's ability to take it. Does the child possess the requisite capacity and the background of experience? Is it economical to devote time and energy to a certain undertaking now or should it be postponed until the child is more mature? The problem of readiness raises issues which overlap many of the concepts and principles set forth in this chapter.

A large number of studies bear in one way or another on the subject of readiness. They fall into certain broad groupings. First are the studies which center primarily on development as such, without seeking to control either the child or the environment. Here we have accounts of the series of changes which take place over periods of weeks or months or years as the child progresses in his language development, for example, from grunts and gurgles to the use of complex sentence structures, or as he progresses, in the development of his social behavior, from fleeting contacts with another baby to complicated teamwork with a large number of peers. Here also fall the many studies which describe the characteristics, abilities, and interests of children at various age levels.

Findings in studies such as these provide important testimony concerning the timeliness of various educational projects. They also have limitations. When a child of ten, for example, displays certain interests and abilities, we cannot be sure whether they reflect his potentialities or whether there might be other things he could master and enjoy if he had a chance to try his hand at them.

In another group of studies efforts have been made to find whether the child's rate of progress or his attainments might be modified if special opportunities for learning were provided. A common procedure has been to pair off children who are similar in accomplishment and then to give one member of each pair some form of extra opportunity or training while the other member moves along at his own pace. For example, one member of a pair of twins receives special opportunity, for a time, in stair-climbing or swimming or in language usage while the other does not. Again, certain children are given the opportunity, in an attractive setting, to learn to sing, while a control group receives no such treatment. As another example, one group of sixth-graders receives special help in the learning of concepts of time, chronology, and the time sequence of historical events, while children in another group are left to pick up such knowledge in their own way.

Comparisons are later made between the paired children. If the youngsters who received special attention perform in much the same fashion as those who did not, this finding suggests that they are not "ready" at this time to profit from special educational efforts in this particular activity. Instead of trying to force or speed the child's progress it would be wiser, other things being equal, for education to center upon other matters. On the other hand, if significant gains are made by those who received the special training, this would suggest that the children are "ready" for education in the undertaking in question.

The above somewhat oversimplifies matters, since readiness usually cannot be defined in all-or-none terms. But it is a distinction that can be made for practical purposes.

Even if we solved the question of readiness in connection with all that the educational program offers, other questions would remain. At a given time, a child may be "ready" for several undertakings which cannot all be accommodated. The fact of readiness alone does not tell what the choice should be. The answer must be sought on other grounds. What, so far as can be determined, is pre-eminent in the child's own development and what problems and hurdles especially confront him at this stage of his growth? What, in the light of the principle of anticipation, is he heading toward, and in what ways is it important for him to be forearmed? It also is proper to take account of the demands being made upon children in their life outside the school.

From another angle we may ask, What happens if a child is "ready" and nothing is done about it? Just as there is a season before which it is not economical to try to learn, is there also a time beyond which it is not well to delay? This problem has not received adequate attention in systematic research. From everyday observation it is possible to find examples of things that seem to become difficult to learn when a person is older. It seems to be more difficult for a person aged about twenty or over than for a person under ten to master the accents of languages that differ from his own mother tongue. Similarly, an adult has difficulty in learning how to pitch a ball if, as a child, he learned only how to toss. Again, there are many acrobatic performances, as well as activities such as dancing, swimming, and various manual skills, which appear to be harder for a person to master as an adult than as a child. Perhaps in some of these inertia rather than lack of capacity makes the difference.

There is the further fact that many performances, such as swimming, skating, which a person can learn quite incidentally if he has a chance as a child, require special effort and attention if he tries to learn them at the adult level. On the other hand, the substitute skills which can be acquired by an adult who has lost a hand or one who has become blinded illustrate remarkable capacity for "new" learning at the adult level.

Observations such as these do not provide an answer to the question of whether there is a season when the iron is hot, so to speak, after a child has become "ready" to learn a certain thing and the further question of how the ability to learn might suffer if learning does not occur during this season. It is likely that if such seasons prevail in connection with some forms of learning it will also be found that they are of rather long duration, especially in connection with learnings primarily intellectual in nature.

CHAPTER III

DEVELOPMENT DURING INFANCY

This chapter and the three following are designed to give an overview of development. They will trace some of the major events in the course of development from birth to maturity. For convenience, the child's career is broken into four periods corresponding to infancy, the preschool years, the elementary school years, and adolescence. A chapter will be devoted to each of these levels.

MEET THE BABY

In our present system of education most schools and teachers are not directly concerned with the everyday details of the care and training of babies. However, a consideration of development during the infancy period is important for the understanding of children who have reached school age. What happens during this early period has a profound bearing upon the later life of the child.

The six-year-old who is just beginning first grade is old in many ways. From the time of his conception his advance on the road to maturity has been greater than it will be during any succeeding six-year period. Yet this child who has come so far has a long way to go. Although a veteran, he still is a baby in many ways. This chapter will not attempt to present a detailed account of growth nor a list of practical hints for the everyday care of infants. Rather, it will sketch briefly some of the major currents and developmental trends during the infancy period.

MUCH HAS GONE BEFORE

When a child is born he already has lived through a period of about forty weeks. During this time his development has proceeded at a staggering pace. He began as a single cell. He now is unmistakably a human being, and he is capable of a large repertory of activities.

The child who has been a distinct creature for forty weeks has origins which extend back into the past through countless generations. His father and his mother are represented in the germ cell from which he started, and so are their fathers and mothers. His forebears have provided the recipe for his being. The forces of heredity already reside in him, and these will determine much of his future development.

They operate quite early in his fetal life as he develops progressively into the form of a human being as distinguished from some other creature. Some of these forces will operate during ensuing years to determine, to a large degree, his size, his physical appearance, his intellectual potentialities. His heredity will also have an influence on the strength and ruggedness of his constitution. It may predispose him to certain weaknesses and diseases. To the extent that his temperament and personality are influenced by the physical properties of his body, even these rather subtle qualities of his make-up will be influenced by heredity.

The way in which these inherited tendencies work themselves out will, however, be shaped to a large degree by what life has to offer. What nature has provided at the start will be affected by the nurture the child receives. Some characteristics with hereditary background will be modified more than others. Regardless of his inheritance the circumstances of his life will make a great difference in determining the kind of person he eventually turns out to be. But his inheritance still has an important influence. It is handed to him at the time of conception. He did not ask for it. Indeed, he was not consulted as to whether he wanted to be born. This rather obvious point is worth remembering when we are tempted to praise or to blame children for the possession of qualities over which they had no control.

BRAINS IN THE MAKING

The child at birth is quite a versatile creature, but he is incomplete in many ways. Among other matters, his cerebral cortex—the brain structure essential for voluntary control of activity and for the higher forms of mental activity which distinguish human beings from other creatures—is still undeveloped. He has a full complement of nerve cells, but the cells of the higher brain centers are structurally immature. One of the major changes which take place with growth is maturation in this area.

Some features of this maturation have been studied, but available evidence does not indicate what is the parallel between the maturing of nerve tissue and the increase in mental capacity which children show from birth until about the age of twenty. It seems, however, that the mental growth which takes place through maturation is analogous in some ways to the increase in physical power which accompanies the growth of other parts of the body. The three-foot three-year-old does not have the height and the reach to get a history book off a six-foot shelf. Similarly, his brain does not have the height and the reach to master the contents of the history book.

HELPLESS BUT STRONG

One characteristic of the newborn which will influence his life in the years to come is his helplessness. His survival from day to day depends on the care he receives from others. This helplessness makes him very dependent on others. It also draws others to him. Ties with others are interwoven with his very existence. These ties remain as he grows older and as he becomes increasingly able to take care of his physical needs. Indeed, as his world expands during the early months of infancy there is an increase rather than a decrease in the meaning and importance which other persons hold for him.

The ties that bind him to others are strengthened not only by what others do for him, but also by what he does for them. Under normal circumstances the baby arouses a powerful parental impulse in his mother. Even the father is likely to be moved by impulses and sentiments that were unknown to his previous experience. Parents differ, to be sure, in the degree to which a child draws them to himself. The impulse may be weaker in a parent who is physically exhausted or grievously ill or harassed by emotional concerns. But the impulses which draw a healthy and womanly mother to her child are undoubtedly among the most primitive and yet tender motives in the make-up of a human being.

THE CHILD NEEDS LOVE

This state of affairs is rather fortunate. The period of early infancy is a period when the child needs mothering. This does not mean that mothering in the sense of a strong love for the child will alone insure the child's welfare. Even at this age love is not a substitute for vitamins and minerals in the diet or for innoculation against contagious diseases. But the child is likely to thrive best if these and countless other details of his care are provided in an atmosphere of affection.

The relationships established between the infant and his parents not only have a bearing on the way in which he learns and behaves at the time but also will have important repercussions in the future. The bonds formed are important for the child's welfare but they also may create problems. Part of the child's business of growing up is to begin almost at birth to move away from his complete dependence upon his elders. Part of the job of being a parent is to allow the child to stand more and more on his own feet. Even during the first few weeks of life developments are taking place which begin to prepare the child to manage his own affairs. By the time he has passed through late adolescence this process of development should have gone so far that the child who was is now competent to become a parent himself.

Later sections in this book will refer repeatedly to this process. It appears in the establishment of increasing capacity for self-help; in the establishment of the ability to think for oneself and more and more to sustain the emotional buffetings of life without support from others at every turn; and in the development of increasing self-sufficiency that renders the more mature person more or less immune to the vagaries of fortune.

PHYSICAL AND MOTOR DEVELOPMENT

In the development of the child from birth to about eighteen months, forces both of growth and of learning are at work. In this period we can trace many developments prophetic of processes which can be observed again in later periods of childhood or which illustrate educational principles applicable also to later periods. These will be briefly sketched in the following paragraphs.

One obvious change is a marked increase in physical size. There is a change not only in the over-all dimensions of the child's body but also in his physical proportions. Compared with the rest of his body his head is huge at birth. It continues to be proportionately large at eighteen months, but already the areas below the head have begun a process of increase in relative size which continues through adolescence, when the youngster who once consisted of a big head on a little body with short legs is, comparatively speaking, a small-headed and long-legged person.

"DIRECTION" OF DEVELOPMENT

In this little detail of physical development we have a principle which applies, to some degree, to the development of behavior. Development tends to proceed from the head tailward. This is true not only with regard to physical dimensions but also with regard to function. The upper regions of the body have priority. At birth the arms are farther along in their development than are the legs. In the months following birth the child is able to carry on a tremendous number of operations with his arms and hands before he is able so much as to stand on his feet and walk.

There is a companion principle. Development tends to proceed from the axis of the body to the extremities. The child is capable of movements involving the large musculature of the part of the arms nearest the trunk before he can do much by way of separate movements of the wrists or the hands. Again, he is capable of hand movements before he is capable of fine coordination of the fingers. This is seen, for example, in the fact that in his first efforts to lay hold of a small object the child tends to corral it or to use what Gesell has called the "palmar scoop." It is not until later that he achieves the fine coordination involved in picking up the object with his thumb and forefinger.

THE "BIG MUSCLE" FALLACY

These two items with regard to the direction of development from the head tailward and from the axis outward incidentally touch upon a practical issue that has recently received a good deal of attention in education. In many quarters it has been claimed that in the education of young children we should be concerned mainly with "large muscle" activity. There is some basis for this notion, but it can readily be emphasized to a degree quite out of line with development. Actually, as indicated above, a child is capable of quite "fine" muscle activity—as in the use of thumb and forefinger to pick up a little object—before he is capable of "large muscle" activity such as is involved in walking, running, or dodging. Indeed, before they have reached the age of a year many children are capable of a large array of manual manipulations of a rather delicate sort. When we provide play materials or other forms of equipment by means of which children in early years can educate themselves, our choice should not be based on the question of whether this material happens to involve big or little muscles. As far as it is possible to do so, there should be provision not only for gross but also for finer movements. Given the opportunity, the child will make proper use of both in his own good time. This would still rule out forms of busy work entirely adult in their conception, which might be offered only on the mistaken theory that little children should be occupied only with little things.

LOCOMOTION

The period of infancy to about eighteen months sees tremendous expansion of what the child can do with his muscles. Among the most conspicuous series of changes in the motor sphere are those which lead to the ability to walk. These have many repercussions in the child's behavior as a whole, and they illustrate many principles of development.

They illustrate the role of growth. Walking begins to occur when the structures underlying the mechanics involved in the performance have matured to the point where the child is ready. The child walks in his own good time. We cannot hasten the process materially by trying to coach him, help him, or lure him on.

Walking also illustrates, as do many of the complex motor operations in later years, the impact of developments in one sphere on other aspects of the child's life. Interaction between the various processes takes place even when each of these has a certain independence of its own. This independence can be seen, for example, in the fact that some children walk before they talk, while others talk before they walk. But whatever the order, each of these developments will have profound effects outside its own sphere. Some illustrations follow.

Frequently when a child makes his first ventures in walking he marks time in other activities. His progress in the use of language, for example, may cease for a time. Again, for a time he may abandon a number of activities with his hands in the handling of objects which fascinated him while he was still in the creeping stage.

Again, operations leading to the establishment of walking may have ramifications in the child's emotional life. This is seen most notably in some children when they have reached the stage of being able to pull themselves into a standing position, but have not yet acquired the knack of sitting down again. Such children will sometimes show outbursts of rage when they find themselves in this predicament.

WALKING INTO MISCHIEF

The onset of walking also has a profound effect on the child's career as a member of the family. The child is now capable as never before of invading all parts of the house. He opens latches on gates that previously restrained him. He wins access to things on shelves and in drawers that previously were outside his sphere of operations. In a sense walking initiates what might be called the bull-in-the-china-shop phase of a young child's career. Books and ash trays, pans, bottles, jars, tableware, tablecloths now become the object of his attention. What with the tampering, scattering, and occasional breakage, this is the time that tries the mother's soul even when she remembers that the child is moved not by a spirit of malice but by a spirit of adventure and exploration.

EVERY HURDLE A HAZARD

The establishment of walking also raises new problems with respect to the child's physical safety. If unwatched he may wander off. To earlier dangers of falling downstairs and off tables there are added the hazards of ledges, walls, curbstones, and traffic. When the child combines walking with carrying there are dangers of tripping.

As a child's ability to move about and to get into things improves, the temptations of the world and of the flesh increase. Now, if unwatched, he may try to taste the contents of medicine bottles, explore the flavor of plants and the varying colors of dirt. The calmest parent will have moments of apprehension. Even the parent who is resolved to let the child be as free as possible to learn for himself will have to struggle, again and again, against an impulse to interfere. Moreover, if the youngster is really an enterprising character there are many times when the parent will have to interfere. There will be many "no's" and "don'ts" in the most democratic home. If the parent is inclined to be irritable or impatient he is likely often to resort to heavy-handed discipline. If the parent is inclined to be anxious, he may go to great lengths to curtail the child indirectly by confining the youngster in a "safe" environment.

MOTOR LEARNING RELATIVE TO DEVELOPMENTAL LEVEL

As in walking, so in other motor activities the infant's changes in mode of operation show the influence of growth. The manner in which his method of climbing (up an inclined board, for example) changes as he progresses from creeping to the ability to walk is an illustration. While in the creeping stage the child's climbing shows the creeping pattern—he grips and pushes with his toes. But when walking has become established his climbing shows the walking pattern—he no longer has his earlier facility in gripping and pushing but has to depend more upon his arms to pull himself upward. Climbing is grafted, so to speak, upon a creeping organism at one stage and then is modified to suit a walking organism.

Changes in the mechanics and proportions of the body similarly influence other motor performances, sometimes in a manner that an adult would not be able to predict if he judged solely in terms of what a person of adult stature finds it easy or difficult to do. In one study, for example, it was found that a child quite readily learned to roller skate while still in his second year. He learned to roller skate many months before he was able to make any progress in achieving the coordinated movements required in pedaling a tricycle.

Roller skating, it appeared, suited the bodily mechanics and proportions of the toddler. However, when this same child at six years tried to roller skate, after a period of disuse, he had to practice the skill anew in order to achieve the proficiency he showed at the age of two. The skill in maintaining balance and in maneuvering on skates, as acquired by a short-legged two-year-old, had to be relearned or readapted in order to serve a relatively long-legged six-year-old. On the other hand, it appears that the knack of pedaling a tricycle, once acquired at the age of two or three, does not require corresponding readaptations and so is retained relatively intact into later years.

After the first two years, the child's motor operations continue, of course, to be influenced by changes which take place in the process of growth. As he advances into the preschool and elementary school years, however, the range of his motor skills is influenced increasingly by his opportunities for learning, including facilities, tools, equipment, and the example and instruction provided by other children and by adults.

MENTAL DEVELOPMENT

In the period from birth to about eighteen months the child makes tremendous strides in controlling his own activities and in controlling his environment. This process will continue in one way or another throughout the whole period of his development and, for that matter, throughout the span of his life. Many of the changes which take place are in the nature of gains in capacity for voluntary action. At birth much of the child's behavior is vegetative in character. To a large degree his world revolves around his stomach. Much of his time is spent in sleep. He becomes hungry, cries, is fed, he sleeps, he wakes, is hungry, and is fed again. In the meantime, nature has its way with him through frequent evacuations of his bladder and his bowels.

EXPANDING HORIZONS

Rapidly during the ensuing weeks he becomes able to participate more actively in the world about him. He becomes capable of coordinating his eye movements, of fixing his eyes upon an object and following its movements, and he rapidly learns to identify by sight a countless array of things. Similarly, a world of sound opens up to him. Through the "distance receptors" of sight and hearing he launches into the larger world even while he still is confined to his crib. This process continues, of course, in the years to come. The development of his visual activities carries so far eventually that much of what is in his mind is conceived by way of visual symbols, and in ordinary speech he, in due time, will say, as does an adult, "I see" when actually he means "I know" or "I understand." Through sight and hearing and other forms of sensory perception he begins the process of vicarious extension of experience so that, in time, his mind extends vastly beyond the limitations of time and space wherein his body is confined.

A major aspect of the child's advance in active mental operations is observable in his increasing capacity to respond to symbols and to make active use of symbols himself. The click of the door latch now serves as a symbol that his mother is coming. He stops his crying and behaves as if she already were with him, whereas earlier it was necessary for his mother actually to enter his room and take him in her arms to accomplish this effect.

LANGUAGE

The development of response to symbols and the use of symbols is illustrated most dramatically in the development of language. By the age of eighteen months nearly all children understand a great deal of language. Most of them have used language of their own for some time in the form of words and in the form of other sounds and vocalizations which have meaningful intent even though they are not in the dictionary of any known tongue. The words the child hears and understands and the words he uses symbolize a wealth of meaning, just as did the click of the latch of his nursery door. With enlarging mastery of language he vastly increases his control of his environment.

ROUTINE HABITS

Most children during the first eighteen months of life are subject to intensive educational influences. Much of their education comes casually through the various pressures surrounding them. But even from the time of birth most children receive a good deal of education that is quite deliberate in nature. Everything that is done for the child, his schedule of feeding and everyday care, the manner in which others play with him and talk to him, the expressions of praise and reproof, the moods and attitudes of his elders, the do's and don'ts that fall upon his ears, the treatment he receives from other children, the opportunities to meet people from outside the household and the manner in which these people respond to him, constitute a portion and only a small portion of the educational influences that are brought to bear.

One of the many important aspects of the infant's education centers upon the training he receives in the ways of civilized behavior in the home. He is undergoing a process of domestication which continues into later years. Much attention is given to feeding, sleeping, and elimination.

SOUND DOCTRINE ON BLADDER CONTROL

In promoting this phase of a child's education there is much that can be learned from the child himself. In training for bladder control, it is important to hold off until the child is ready. At birth the process of elimination is reflex in character. The child could not exercise control even if, by some fluke of nature, he decided it would be a good idea to try. The brain structures underlying voluntary control of the sphincter muscles are not ready to function at birth. According to available evidence many months elapse before they are ready. Until the child has the neural machinery necessary for taking an active part in the learning process, any learning through "conditioning" consists largely of an effort to impose on him a habit that belongs to someone else.

It is not possible to specify precisely when the child will be ready for toilet training. Children differ in their rate of progress in this sphere as in others. However, according to available evidence, the best clues are those obtained from the children themselves. In various ways children announce that they are able to begin to participate in toilet training through little signs which show that they are aware of the process of voiding the bladder, that they perceive the tinkle and have some notion as to its origin, show an interest in puddles, or, usually at a later stage, have certain sounds or words which serve as definite symbols for the process of urination. Such evidences are not likely to appear until about the age of a year.

SLIPS AND RELAPSES

Even after the child shows such signs, his learning may be slow, and whether the learning be slow or fast there are likely to be many slips. The child may seem to have good control and then backslide. A similar phenomenon is seen in other aspects of development, as when a child perhaps walks a step or two and then does not do so again for a period of days or even weeks, or seems to have reached the stage where he is able to drink from a cup and then for a time seems to have lost the knack. Frequently in these and other developmental matters a youngster will make what appears to be a premature announcement that a milestone has been reached when actually the achievement is still in process of being established and is not yet ready to function as a regular thing.

Again, in bladder control as in other matters, children occasionally will show relapses even after the habit seems to have become pretty well established. Many factors may be at work to cause this, such as illness, fatigue, overexcitement, and strains of various kinds. After an unusually exciting day, for example, a child well past the infancy level may for the first time in several weeks or months wet his bed, suck his thumb, show "babyish" crying spells or temper tantrums, or demand to be spoon-fed. A similar falling back to a more infantile form of behavior may sometimes also occur if the child, for example, is jealous because of the arrival of a new baby in the family.

REGRESSION

The term "regression" is sometimes used to describe this phenomenon. Regression of one sort or another to an earlier mode of living may occur not only during infancy and early childhood, but at any time of life. Many motives concerning which the individual may not be fully aware come into play in such regression. In falling back upon an earlier form of behavior the individual may unwittingly seek to gain sympathy or to win attentions he earlier enjoyed. His regression may be in the nature of a retreat to a previous, and what to him was a more secure, form of existence.

FEEDING

Much of the child's early training centers around feeding. By the age of eighteen months most children have moved toward a diet that contains many solids, have acquired a number of teeth with which to chew these foods, and have passed from the phase of having to be fed to the ability to take quite an active hand in feeding themselves. Apart from the matter of nutrition the development of feeding behavior in children presents many practical issues. We shall take space here to consider only a few of these.

WISE BABY

One practical question touches upon the rather fundamental issue of how far we can be guided by the child himself in what we do for him. So far as feeding is concerned, how far can we trust his appetite? How wise are his own demands as to how much he wants and when he wants to be fed? Some interesting studies bear on this question. Two deal with the behavior of young infants, still at the breast or bottle stage, when put on a "self-demand" schedule. With certain minor exceptions the babies in these studies were fed not according to the clock but whenever they seemed to want food, whether this meant many feedings or only a few feedings over a given period of time and whether they took a great deal of food or only a little food at one feeding.

These studies indicate that young infants show what would seem to be a great deal of wisdom in these matters. For reasons residing wholly within themselves the infants studied would, at a given feeding, take only a few sips or drain a couple of bottles; the number of feedings they demanded varied from day to day. Intervals between feedings might occasionally vary from a matter of minutes to a matter of many hours. And yet, from day to day and from week to week these babies thrived when fed on a schedule which followed their own choosing as far as possible.

These observations are enlightening so far as they go, but it must be recognized that in a great many homes it would not be possible to adhere meticulously to a child's own timing.

SELF-SELECTED DIETS

Similarly interesting are findings in studies dealing with children who have been weaned and whose diet contains a variety of foods. In such studies it has been found that children appear to be able to make good choices. At a given feeding or even in feedings extending over a period of time a given child might make choices that seem quite bizarre. A youngster might consume about a half-dozen eggs or several bananas or, in connection with a certain feeding, consume what seemed to be unseemly quantities of table salt, and yet from week to week strike a good nutritional balance. In individual cases, which may have been exceptional, it appeared that children were almost uncanny in their selection. One child, for example, who was suffering from rickets, chose to consume large quantities of cod liver oil until his rickets were healed, and then he laid off the cod liver oil.

Findings such as these, like the results mentioned above, are subject to certain practical reservations before they can be generally applied. For one thing, in these studies, even though the children were free to make choices and to take as much of any article of food as they wanted, the adult still played the very important role of continually supplying articles of food which, in the long run, could provide a well-balanced diet. A regime of self-selection, in other words, would, if anything, require that the adult possess more rather than less knowledge of nutrition than is possessed by most parents. Again, it would be difficult in homes where there were only one or two children to supply articles of food from which a selection could be made without, at the same time, entailing wastage.

We cannot, accordingly, on the basis of these studies recommend forthwith that children of all ages, whatever their circumstances, be put on a "self-selected diet." However, findings such as these deserve serious consideration by adults who have children in their care. Much difficulty in children's feeding arises from rigid schedules as to time, rules with regard to eating between meals, the rule that once food has been put before a child he should lick his plate clean, the rule that every child should drink a quart of milk a day, and countless other regulations which tend to reduce mealtime to an arbitrary ritual. Some adults, on the theory that it is for the child's good, impose regulations which they themselves would never follow. Other adults have from childhood absorbed such regulations to the point where they would suffer discomfort rather than leave a half-eaten potato on the plate. Very often the rules that hedge the eating situation produce, even when they are not followed, feelings of guilt and strain both in the parent and in the child.

SELF-HELP

Apart from food intake, an important feature of feeding behavior is in the operations involved in feeding oneself. The child begins to play an active role in the feeding process long before he is able actually to bring a spoon to his lips or to drink from a cup. Involved in these operations are very complicated motor skills which become possible only through a process of maturation, coupled with timely practice. There is a complicated sequence of developments leading up to so seemingly simple an operation as drinking from a cup. It is not until quite late in the sequence that a child acquires the capacity not only to grasp the cup in his hands and to convey it to his lips but also to achieve the delicate coordination involved in tilting it as the liquid slowly recedes.

The child's behavior in the process of learning self-help in feeding neatly illustrates many interesting features of development. In this matter, as in many others, he is likely to try his hand before he is capable of a smooth performance. He feeds himself with his fingers. In his first ventures with cup or fork or spoon he is likely to do much messing and spilling. If given the chance he will combine his motor efforts with other forms of exploration as he tries, with fascination, to pour solids and fluids together, to test their consistency with his fists, or experiments with the force of gravity by throwing the mess on the floor.

This situation is one of the many little battlegrounds in the child's struggle to assert his growing powers. He is seeking to use his growing capacities. He needs practice—which means room for making mistakes—in order to acquire competence. Eventually, however, for the comfort of others if not for his own sake, he needs to learn some of the more elementary rules of table etiquette. But in this as in all other aspects of his feeding behavior it is important not to insist on adult standards that go counter to his own developmental level.

EMOTIONAL DEVELOPMENT

From birth to eighteen months there are profound changes in the child's emotional behavior. At birth his emotional responses are quite generalized—he cries, frets, squirms, slashes with his limbs, and shows other signs which betoken emotional excitement of some sort. He is of course unaffected by many happenings which later will move him to joy, anger, fear, sorrow, or gloom.

CHANGES IN EXPRESSION OF EMOTION

With the passing months his emotional responses become more clearly differentiated into symptoms of anger, fear, joy, and quiet contentment. His expressions of emotion also become more clearly defined in their aim and direction. In his first outbursts of anger, for example, the infant may exhibit vigorous crying and bodily movements which seem to be directed at the world in general, whereas later his movements are aimed more directly at the thing giving offense. In like manner, the child's first reactions to a pain stimulus—such as a pin prick—are likely to involve a variety of bodily movements, whereas later his movements become more localized so that he does not, for example, squirm all over but limits himself, perhaps, to a pulling away of the hand that is being pricked and an effort to fend off the pin with the other hand. In infancy as in all later stages of life, however, a person may revert to the more diffuse kind of response under severe conditions.

With this increasing ability to direct expressions of emotion more specifically at something or somebody, there is introduced another set of changes which continue, in one way or another, throughout life, namely, the ability to express emotion in increasingly subtle, varied, and indirect ways. Thus, a frown or a sharp word may function where earlier the child would hit. In the sphere of anger alone this process of substituting milder or more subtle expression for bodily attack goes to such lengths during ensuing years that an adult may be angered hundreds of times and yet never take a poke at anybody.

PARALLELS BETWEEN EMOTIONAL AND OTHER ASPECTS OF DEVELOPMENT

In the changes in the infant's emotional behavior we see the effects of developments in his make-up as a whole. In the course of his intellectual growth, for example, the child becomes increasingly able to notice things, and so, at the age of about half a year or thereafter, he may distinguish between a member of the family and an outsider and, for the first time, show fear when a stranger comes close to him or tries to pick him up. In like manner, the widened scope of his motor abilities brings him into touch with a widened range of occasions for anger, fear, or pleasure. The increase in his all-round ability not only thus widens the scope of his emotional experiences, but may also make him immune to conditions that aroused him at an earlier time. The occasion for anger in the child who was able to pull himself to his feet but was not yet able to sit down again would pass with growing ability to do the latter.

EFFECTS OF EVERYDAY EXPERIENCES

The emotional behavior of the infant not only shows broad developmental trends, such as those noted above, but can be influenced by specific conditions that bear upon him from day to day. A startling douse of cold water, for example, or the pain of water that is too hot or the fright of being submerged and almost choking may "condition" the child against his bath, at least for a time. On the other hand, a child who is handled skillfully and playfully at bath time may come to regard bathing as one of the major pleasures of life. In this, as in countless other aspects of his everyday life, a child's emotions are being educated in quite specific ways. More subtly, and in ways difficult to trace, his emotions are also being educated by the emotional "climate" in which he lives—the degree to which his elders are tense or relaxed, moody or cheerful, irritable or placid, worried or complacent, solemn or boisterous.

SEX IN INFANCY

The fact that certain forces and phenomena which can be traced through various channels during later periods of life make their first appearance in early infancy holds true even in connection with aspects of development usually associated with a later period of growth. Developments relating to sex, for example, constitute one of the pre-eminent features of the adolescent period. Yet behavior that has reference to the sex organs, and quite likely certain attitudes with reference to sex, have their inception in the infancy period.

At an early age the genital organs of infants are not simply structures that are associated with elimination. In infant boys there occurs the phenomenon of tumescence resulting in the erection of the penis, and detumescence. A large proportion of both infant boys and girls manipulate their genital organs in a manner that resembles masturbation. Just what are the sensations associated with this act we have no means of knowing. The act can hardly be regarded as equivalent, on the physical side, to the complete act of masturbation as it can occur at puberty. Be that as it may, here is an activity centered in the genital organs, and to that extent it seems to represent a form of sex activity.

Such behavior is likely to attract the attention of the child's elders. These elders, by virtue of their past training, have certain attitudes with regard to matters connected with sex, and these attitudes in one way or another will be brought to bear on the child. Some adults may feel driven to use strong repressive measures. Others, who are less concerned or who look upon this behavior as something that is likely to be a transient phase of infancy (although the same kind of behavior may recur at later times), view the matter more complacently. Even in such households, however, the infant may come under the influence of adults who are much disturbed and who take steps to drive home some first lessons in sex education.

Just what impression these attitudes and behavior make upon a young child we have no way of knowing, but it seems reasonable to assume that adult counter-measures sometimes would have the effect of bringing the genital organs even more strongly to the child's attention than they were before and perhaps, in the case of an older infant, may have the effect of inducing in the child feelings of guilt. Whatever the effect, he will, already at this rather tender age, have been exposed to some of the many influences that go into the making of sex education.

EARLY EMOTIONAL EXPERIENCES AND PERSONALITY DEVELOPMENT

Scientific knowledge of the role played by the infant's emotional experiences in the development of his personality and in determining his future emotional stability is quite meager in proportion to various sweeping claims that have been made on the subject. What little we do know is enough to suggest that emotional development in infancy is a matter of great importance. For one thing, when only a few weeks old infants show marked individual differences in their emotional tendencies. They vary in the extent to which they are quiet or outgoing, irritable or placid; some are much more easily "upset" than others. As noted in the following section, by the age of two or three children are likely to show emotional tendencies which distinguish one child from another and which seem to be quite strongly entrenched.

Limited studies suggest that inborn factors may predispose children at an early age to differences in emotional behavior and in the various qualities which we describe as a person's temperament. The hand of nurture also obviously is at work. We do not have sufficient evidence from which to generalize conclusively as to how the forces of nature and nurture interact upon each other, or how far, through the control of nurture, education might determine the course of development in this sphere.

The question of what can be done in this matter through parent education and other means during the months of infancy is certainly not an idle one in view of what education strives to achieve as the child grows older. The announced objectives of education at the elementary and later years often include emphasis on matters such as emotional adjustment, good citizenship, the "integrated personality," and the like. Everything that education offers the child once he goes to school will be received by the child in terms of what he already is. Education builds upon the structure that already has been laid. If, as seems to be the case, important features of the personality structure have been established before the school usually gets hold of the child, we are, to a certain extent, trying to build a superstructure without having had a hand in the laying of the foundation. This is only one other way of saying that the farther we go in efforts to put into effect the larger objectives of education the more education should be concerned with the early childhood years. In the absence of such concern, much of what we seek to do with the older child may be in the nature of trying to undo what already has been done, trying to remedy weaknesses already established, or, what is also quite likely, trying to do something for the child that is out of keeping with his own nature.

The findings in child development do not offer a ready-made list of educational rules for dealing with this issue. The child development approach does, however, emphasize its importance. It also emphasizes the need for further research.

We now pass on to the next period. In the account of the preschool and later periods there will be occasion to weave in many lines of development which have their origins in early infancy, but which have not been touched upon in this chapter.

CHAPTER IV

THE PRESCHOOL YEARS

During the preschool years the child hits his stride as a learner in the many departments of life. The forces of growth so prominent in infancy continue to augment his powers, but the role of learning becomes more and more important as he moves from eighteen months to the age of six. In this period his accomplishments are influenced increasingly by what his environment offers. During the earlier months of life the impetus of much of his progress came from within. He had to wait until he was ripe for walking. Little could be done to hasten the development of the basic coordinations involved in the use of his hands and fingers. But when these foundations are once established, the skills that the child builds upon them depend increasingly on the opportunities that come his way.

DEVELOPMENTAL ACHIEVEMENTS

By the age of six a child has been initiated into most of the major forms of experience that can befall a human being during his lifetime. He is now a creature with rather good powers of reasoning. Where earlier he lived in a mental world that revolved primarily round the present, he now is capable of vivid memories of the past and, through his imagination, can project himself into the future. He has had a taste of the bitter and the sweet of human emotions. He is able to worry about the future and feel remorse about the past. Where the feelings of the eighteen-month-old child centered primarily on the here and now, the six-year-old is able to borrow from the troubles of tomorrow, to feel angry at the prospect of thwarted plans, and to thrill with joy at the thought of a coming event. He has moved far into the social life of the world. Where earlier he was capable only of fleeting interest in other children, he now has been initiated into much of the give-and-take of social intercourse. He realizes many distinctions between other persons and he is drawn more to some than to others. He has had the experience of friendship, of being a follower or a leader or both. To a greater or lesser degree, he has had the experience of jealousy. He is versed in many forms of competition and he knows what it is to exult as a winner and to feel vexed or disappointed when bested by someone else.

At eighteen months he had to be helped with his eating, dressing, elimination, and grooming. Now he is quite a domesticated person and not only takes care of most of these things himself but is able to take many additional responsibilities by way of little jobs around the house, errands, and the like.

In his motor development the youngster who at eighteen months walked rather unsteadily and had limited manual ability now possesses motor skills that are almost countless in number.

THE SOCIAL LIFE OF THE PRESCHOOL CHILD

Among the most conspicuous features of the period from eighteen months to six years are the developments that take place in connection with the child's dealings with other people.

At the beginning of this period his daily life revolves very much round adults. He is attracted by other children, but his dealings with them are likely to be in the form of brief interchanges. Except for short periods, other children are not likely to supplant his elders as the focus of his attention. He is still socially dependent on his elders, just as he is very much dependent on them physically. The process of weaning is quite incomplete. By this time he is likely to have been weaned from the breast or the bottle for several months, but he has not been weaned from his mother's care. By the end of this period this process of physical weaning has neared completion in the sense that the child can take care of many of his own physical needs, but the process of "psychological weaning," to use L. S. Hollingworth's term, will not, in the normal child, be complete for many years to come.

RELATIONS WITH ADULTS

DEPENDENCE-INDEPENDENCE

In much of the social interaction between a child and his elders at the beginning of this period, the youngster seeks help, comfort, and company. He is likely to call attention to himself frequently. He leaves his own projects repeatedly to be with the adult. He still likes to nestle, nuzzle, and cuddle. From time to time as the mood strikes him he will go out of his way to show and to seek affection.

But while he is thus beholden to his parents there is another quality that becomes prominent in his relations with his elders. In many of his dealings he is asserting himself as an independent person. His self-assertion takes many forms. He experiments with methods of having his own way. His experiments may range from little forbidden acts to gross disobedience. He may perform such experiments in a mood that ranges from playfulness to seeming malice. Some time between the age of one and four most children go through a phase when they assert themselves by doing forbidden things and by various forms of resistance and obstinacy that frequently are puzzling and annoying to the parent. At table the child may ask for a certain item of food and then, when he has it, announce that he does not want it. He may ask his mother to put on his wraps so that he may go outside, and then when this labor is done, ask to have them taken off, and when this is finished, once more insist on the wraps. Some of the most sophisticated forms of resistance come by way of language. For example, when the father happens to say that he had four brothers and sisters, the youngster may stoutly respond, "No, you didn't, you had forty-eight." Again, the grandmother has just brought a doll, but the youngster, knowing this, insists it was her uncle that brought it.

MORE ABOUT SELF-ASSERTION

Resistance may be limited to certain repeated acts of stubbornness or it may become so pronounced that it seems to permeate nearly all the child does. In extreme cases it may go so far that the child refuses food to the point where the parents fear he will starve. Such a condition, however, is exceptional and it probably means that something is wrong in the way the child is reared. However that may be, it would seem that the germ of selfhood, in order to grow, requires the experience of opposing the self to other selves.

The phenomenon of resistance in milder or in severer forms appears in practically all children. It is so universal that it would seem to be a normal feature of the development of the self and of the development of techniques of social behavior. It is difficult, however, to judge the extent to which the resistance of children is something natural or necessary in their development and the extent to which it is a product of the way adults deal with children. The research on the subject does not offer a definitive answer. However, it is possible to identify many of the factors that come into play. Resistance seems to be a product both of something in the nature of the child and of the way he is handled. Certainly a child's drive to assert himself may be regarded as something natural rather than as something he has to acquire. On the other hand, the particular ways in which this motive expresses itself will be influenced by the environment, including, notably, the extent to which the child is subjected to strong-arm, arbitrary methods or is treated in keeping with his status of development.

There will be occasion for opposing the parents, however, no matter how gentle and wise they may be. It would be impossible completely to spare the child from thwartings and what to him may be arbitrary rules. There are times when he must be restrained for the sake of his physical safety. An enterprising child will get into a great many situations without fully realizing what the consequences may be. There are times when he must be restrained to protect other people, to prevent the destruction of property, and to prevent bad blood between neighbors.

LESSONS IN CONFORMITY

There is not space to elaborate upon this matter or to discuss the mental hygiene aspects of it. It is not amiss to point out, however, that from early childhood, and certainly long before the youngster reaches the first grade, he has gone through a great deal of schooling in the ways of conformity to the demands of his environment. If this were not the case we would never, for example, behold the spectacle (usually taken quite for granted) of thirty or forty first-graders adapting themselves docilely to classroom routines. When a child is six, parents and teachers capitalize in countless ways on lessons in conformity the youngster has learned during earlier years.

The phenomenon of resistance, or what may seem at times to be willfulness and perversity, is not, of course, limited to early childhood. The normal child keeps up the good fight during ensuing years. In times of stress there may even be a recurrence of a seemingly quite unreasonable form of resistance. This is notably true of some children as they enter the adolescent phase. But as the child grows older there normally are changes in the way in which he asserts his will. As in the expressions of his emotions in general, he learns to use more subtle techniques of self-assertion. Again, as he grows mentally and reaches the level where, as the saying goes, we can "reason with him," he comes to realize that many restraints were not as arbitrary as they may earlier have seemed. Moreover, in the process of learning to live with others he discovers that it is not expedient to make an issue of too many things and, what is more important, he discovers an increasing variety of means of getting his own way. In the meantime, also, his parents will have learned what they can get away with. The adjustments that go with a decline in the more obvious forms of resistance are not made by the child alone but also by his parents.

In passing it may be noted that while some of the forms of resistance which appear at two or three or four normally wane, there are individual children in whom the more infantile ways of resistance persist into later years just as there may be a persistence of other infantile characteristics if things have gone wrong. So it is that we may find even in a mature adult a curious streak of negativism in the form, say, of taking issue with nearly everything that others say even if the matter is quite unimportant, or in a stubborn refusal to see the point.

PUTTING ON THE SCREWS

Resistance arises at least in part as a symptom of conflict between developmental and cultural forces. Every society, primitive or modern, places certain demands for conformity on its members. The business of living in a world where there are many other people and where there are many established customs demands that the individual acquire forms of behavior which would not arise spontaneously within himself. This fact is pointed out in an earlier chapter where it is noted that the education of the individual child cannot be founded solely on developmental tendencies with the child. The culture in which the child lives will make demands that are inescapable.

It also is true, however, that the cultural standards may in themselves be unwise or quite out of line with the child's capabilities. The more the requirements of the culture are out of line with the child's own nature, the more difficult will it be to put these requirements into effect. Moreover, whatever the cultural standard, it will best be achieved if its demands are scaled to the child's growing capacities. Eventually, for example, we want a child to be reasonably tidy, careful of property, respectful of the possessions of others, truthful, persevering in effort, but these virtues are not likely to thrive in a wholesome way if they are imposed upon young children in terms of absolute adult standards.

SMILES AS WELL AS FROWNS

When we take note, as above, of various forms of self-assertiveness in the child's dealings with his elders, this does not mean, of course, that such behavior is predominant in the normal behavior of a child. Actually, even when a child does a fine job of resistance, the occasions when he not only complies with the wishes of his elders but actually takes the initiative as a helpful and friendly person are likely far to outnumber the occasions when he balks. Such helpful behavior, however, often comes to be taken for granted.

Moreover, even while the child most sturdily asserts his own individuality he continues, as in infancy, to count heavily upon the affection and loyalty of his parents. Also, as was true in infancy, the parents' basic attitude toward the child counts for much more than this or that technique of discipline. So it is that a child whose parents are genuinely fond of him will be much more secure and spontaneous even though his parents occasionally spank him than another child whose parents never spank but are not completely devoted to him. Further, the mutual feeling that parents and children have toward each other cannot be judged simply by the extent to which they do not get into each other's way. The child who feels solid in his relations with his parents is likely to be considerate of them in many ways, but he is also likely to feel free to misbehave. This holds true also in later years in a child's relations with other adults. The child who is confident of the friendliness of his teacher will feel free to be ornery at school at times just as he is at home. Even so, he is likely to be a good deal less ornery at heart than the child who thinks his elders are against him or don't care much for him.

RELATIONS WITH OTHER CHILDREN

In the period from eighteen months to six years, the child's dealings with other children assume increasing importance. If given a chance, the child makes marked progress in a line of social development which will continue until he is mature, namely, the building up of relationships with people outside the home. These relationships become increasingly important to him as he grows older. They represent a part of the process whereby he moves from complete absorption with matters in his own home toward the establishment of a life of his own outside the home. While this feature of development has its inception during the preschool years, it is not as pre-eminent in the child's life as it will be during the middle and late elementary and the high school years.

In their dealings with others, children move by progressive steps that are more or less characteristic of all children. At the age of about two, as we have noted, their social contacts tend to be of short duration and of a simple nature, just as in their own projects they tend, at this age, to move from one thing to another without persisting long in one enterprise. Moreover, in their first social contacts there may be a good deal of watching what the other child does, as distinguished from actually joining him. Again, youngsters may exhibit a good deal of what might be called "parallel behavior": they are drawn together in space, they may be doing the same things, but there is not the give-and-take and the merging of individual activity into a joint activity which we see at a later time.

The changes in children's social dealings with each other as they grow older take many forms. They are likely, when occupying the same quarters, to spend more time with each other, to maintain contact for longer periods at a stretch, and they show increasing ability to fraternize not simply with one but with many children at one time. These lines of development, however, are far from complete by the time a child reaches the age of six, for at this age youngsters are not able, without adult help, to operate in social groups as large as the enrollment of the usual first grade class.

SELF-ASSERTIVE BEHAVIOR

In his dealings with other children, as in dealings with his elders, the child shows himself to be an individualistic as well as a sociable creature. On the one hand, he fraternizes with others, learns to join in give-and-take, and by the age of six is quite skillful in many forms of cooperation. On the other hand, he guards what he considers to be his own rights, claims possessions as distinctly his own, and frequently resists or combats the encroachments of others. In one group of nursery school children it was found that aggressive behavior in the form of actual snatching, pushing, and the like, or of verbal provocations occurred at about the rate of once every five minutes per child. Such behavior, ranging from fisticuffs to argument and bickering, is a normal feature of the social behavior of children at this age.

Many factors are involved in such behavior. Frequently it occurs without malice aforethought. In his dealings with children, as in his dealings with adults, the child does a good deal of experimenting. He lays hand on others' property to see what will happen. He may even take an experimental poke at another child. Again, many disputes occur quite accidentally, as when children unintentionally get into each other's way. By and large, the more enterprising a child is, the more he gets around, the more occasions there will be for a tussle. There is also the interesting finding that children tend to bicker most often with the youngsters they seem to like best. The reason is that the more time a child spends with another youngster the more occasion there will be both for friendly interchange and for dispute.

Occasionally bitter feelings come into play, as when children go out of their way to punch each other or, as sometimes happens by the age of three or four, gang up on another child. Moreover, hostility in a child's dealings with his peers will be influenced by other currents in his emotional life, such as jealousy in his relations with members of his family, a strong desire for attention, and the like.

CHANGING TACTICS

In his combative behavior as in other aspects of his social behavior certain developmental trends can be noted. As the child advances from the age of two to the age of six, he is likely to do less hitting and more talking in his disputes with others. He becomes more adept at avoiding occasions for conflict (unless, for reasons that may be independent of his social contacts with children, he has a chip on his shoulder). He also becomes more adept in using refined techniques of combat or self-defense, among these ignoring, bargaining, diverting and bringing the weight of precedent to bear, such as "I had it first," "It's my turn." Even at an early age a child may be deterred by the discovery that there are some children who can outfight him. As a result, there tends to be a decrease with age in physical altercations although youngsters at six and thereafter are likely to continue on occasion to use their fists.

SOCIAL TECHNIQUES REQUIRE PRACTICE

Social dealings with others, whether they be friendly or combative, involve many techniques and skills much as do the performances of riding a bicycle or tying one's shoes. The techniques which a child uses to hold his own with other children involve skills which must be learned. Limited evidence indicates that if adults take a hand and never allow children to settle their disputes in their own way, such youngsters may at a later age, when left to their own devices, use techniques which they would have learned to abandon had they been free to learn at an earlier time.

In a study of children's conflicts with one another it was found that teachers in one nursery school interfered with children's own ways of settling their squabbles to a greater extent than was true in another nursery school. Partly as a result of this procedure there was less fighting in this school than in the other. The next year, however, the children moved on to kindergartens where a good deal of freedom prevailed. The children who earlier had had their fighting curtailed now did twice as much hitting as the year before, while the children who had been relatively more free to act during the preceding year showed a decline in their hitting. A finding such as this does not mean that children have a certain amount of fight in their systems that has to be worked off. It seems to mean that it takes practice to learn the techniques normally substituted for physical combat as children grow older.

SIMILAR BEHAVIOR MAY SERVE DISSIMILAR PURPOSES

Combative behavior in children, incidentally, offers a good illustration of the fact that a given form of behavior may serve a variety of purposes and function quite differently in the lives of different children. Thus, an outcropping of aggressiveness may be an encouraging sign in one child while in another it may be a symptom that things have gone wrong. For example, in one study two children showed an increase in their combativeness as compared with their own past behavior and that of the group as a whole. One of these youngsters had previously been dominated by another child and was trying to break away. In the process of building good social contacts with a number of other children she had to fend off the attentions of the child who had dominated her, and it was this that caused an increase in the frequency of her combats. The more she succeeded in breaking her own bonds, the better was her situation in the group as a whole.

Quite a different state of affairs obtained in the case of the other child who also showed an increase in combative behavior. He had lost his hold on a former close companion and when he set out to establish connections with other children he used rather bossy methods. These were resented, with the result that other children would try to get rid of him, and at this he would fight back. But by fighting back he increased his difficulties.

The forms of self-assertiveness described represent, of course, only one feature of the child's social activities. The normal youngster who asserts his rights is also the youngster, as was noted earlier, who enters into countless contacts of a friendly sort. Indeed, research evidence indicates that though various forms of combative behavior are frequent they are far outnumbered by friendly dealings.

COMPETITION

By the time children reach the age of six most of them have grasped the idea of competition, and competition enters into their play just as do various forms of cooperation. Before the age of three many youngsters show some knowledge of the idea of competition and exhibit certain forms of rivalry; but behavior of this sort is likely to be more prominent at four and five than at three. It may appear in a variety of forms, such as assertions of superiority: "I am bigger"; "I am four, you're just three"; "My daddy has four cups of coffee for breakfast" (as a retort to a child who has claimed his father has three). It may take the form of efforts to corner or monopolize things, such as gathering to oneself a lion's share of the blocks or crayons. It may take the form of keeping an eye on the other's performance and comparing it with one's own, and of actual tests of ability and skill. The desire to outdo others may also take the form of boastfulness, exaggeration, false claims to achievement, and the like.

The intensity and forms of the child's competition will be influenced, of course, by many factors in his life, such as tensions within the family, emphasis on competition in the home, such as the practice of holding up another child as an example, and any circumstance which gives the child the notion that the way to get attention or to be somebody is to excel somebody else. It would be easy to put a finger on many conditions in our culture which encourage competition, even at the early age of two or three. Moreover, the things for which people compete, obviously, will be influenced by the culture. However, to ask whether children have a "natural" tendency to vie with one another or whether such behavior is entirely a product of the culture would carry us far into the field of speculation. From an educational point of view it is wiser to deal with competition as a fact rather than as a theory and to ask how this form of social behavior can be utilized to the best advantage of the individual and the group.

The values and abuses of competition will be dealt with further in the discussion of the child at elementary school age.

LEARNING THROUGH COMPETITION AND EMULATION

In passing, it may be noted that even during the preschool years competition in one form or another is involved in much of the education children receive from their peers. Beginning at the age of two, if not earlier, children are much influenced by the example set by other children. A note of "I can do it too" can often be observed in the behavior of youngsters when they are together. One chins himself on the dining-room table and the other now does likewise, for the first time, although there had been plenty of opportunity before when he was alone. Again, a child may drain his milk and clean his plate when he sees another youngster do it, whereas earlier he had been inclined to dawdle. In this manner, a youngster's behavior may be influenced in countless ways, ranging from situations where the motive of competition seems obvious to situations in which the desire seems not so much to equal or outdo as to play the game.

MOTOR DEVELOPMENT

WIDE RAMIFICATIONS OF MOTOR SKILLS

The gains occurring in motor abilities in the period from a year and a half to six years have important effects on all aspects of the child's everyday life.

The child acquires a vast array of motor skills in matters of self-help which have an important bearing on his competence as a person and on his relations with his elders. The skills he acquires in running, skipping, climbing, tricycling, and numerous other play activities provide the basis for a large proportion of his social dealings with other children.

Competence in physical activities also has an important bearing on the child's emotional life. His physical activities provide a source of pleasure. His ability in such activities affects his self-confidence; by virtue of skill in the use of his muscles, he becomes able to deal with physical obstacles that otherwise would thwart him and arouse anger, and to face or participate in many situations that otherwise would scare him.

MATURATION AND LEARNING

At the beginning of the period here under discussion (age two or thereabout), children are still in the process of consolidating some of the basic coordinations involved in the use of their arms and legs. Already at this period, however, they have gone far toward building up a number of specialized skills. With advancing age during the preschool period the child's motor development takes place increasingly by way of branching out into a wider and wider range of skills that have to be learned. The older he grows the more dependent does his motor development become on opportunities for learning.

His development is still, of course, influenced by the factor of growth as well as learning. Not only does he grow bigger and stronger, and undergo changes in bodily proportions, but the process of growth also brings about certain changes in bodily mechanics that make a difference in the way he goes about things and in the extent to which he will profit from practice.

One little motor operation, for example, that is rather important in connection with the learning of self-help is the operation of buttoning. Despite the advent of zippers, children's clothes of today still require a good deal of buttoning. For the child to manage this buttoning himself is quite an advance for him and a convenience for his mother. Even in this operation, however, we must wait for nature to take its course before the child can master the art. In one study, two-year-old children were given the opportunity and encouragement to button buttons. At the end of several weeks of practice of this sort, they did not do an appreciably better job of buttoning than did another group of two-year-olds who had not been "trained." In due time, however, youngsters will try their hand at buttoning on their own accord and gain considerable skill.

Changes brought about by maturation, as distinguished from practice as such, can be noted in connection also with other performances. Skipping is one of these. In his first efforts to skip, the child is likely to hop with one foot and run with the other rather than to achieve an alternation of hops. At this stage a youngster may become irritated if an adult tries to get him to do the regulation skip. At a later time, when this same youngster is "ready" for skipping, he quickly masters the art.

Changes in capacity brought about by growth as distinguished from practice are illustrated also by tricycling. The knack of pedaling by means of opposing movements of the legs is something that children usually are unable to acquire until many months after they have learned to walk. Before the child is "ready" it does little good to place him on the seat and to help him through the motions of pedaling. But at a later age this youngster may acquire the knack of pedaling with relatively little practice.

The proposition that what we provide by way of motor education should be suited to the child's readiness unfortunately raises more questions than it answers. Research studies offer some findings with regard to readiness for various motor performances, but these findings deal with such a limited number of activities that they hardly begin to tap the subject.

UNEXPLORED POTENTIALITIES

Our interest in the motor development of the preschool child is not limited simply to the question of the skills which may be more timely at a later than at an earlier stage of growth. We are interested quite as much in the larger question of what are the motor potentialities of children at any age within the preschool period. We can answer this question in part simply by everyday observation of what children can do. In addition, there are some systematic research findings showing what children can do. But the evidence from studies of nursery school children indicates that research workers and educators alike have barely made a start toward a systematic inventory of the motor potentialities of the preschool child.

In one study it was noted that by the age of about three and a half children in nursery schools had substantially mastered most of the main items of motor equipment that a nursery school customarily provides by way of apparatus for climbing and sliding, wheel toys, swings, and the like. So far as motor learning was concerned, there were no new worlds for these youngsters to conquer. Limited evidence such as this suggests that older children in a nursery school with conventional equipment reach a point where they are marking time. They are repeating performances they have already mastered. Where such is the case, it is likely that the youngsters would be only too glad to try their hand at new or different things.

This raises a question: What are the new and different things that might be added? An adequate answer would require more research and more educational experimentation than has been undertaken to date. Such research and experimentation should, of course, go farther than simply to discover the range and variety of skills that children in this age range are able to learn. Even with a full inventory of feats that children could acquire we would want information on points such as these: skills useful primarily in themselves as distinguished from skills of possible service in connection with a child's social activities and intellectual enterprises; skills useful primarily only for a limited time span as distinguished from skills of possible value in the future.

SCALING TO SIZE AND CAPACITY

A child's ability to acquire and enjoy a motor skill is influenced, of course, not simply by the mechanics of the operation but also by the nature of the equipment provided. Thus, a youngster may be "ready" to learn how to propel a tricycle, but obviously fail if his tricycle is so big that he can't reach the pedals. He may be "ready" for quite complicated ball play, but fail in catching a small ball in his hands when he would succeed in catching a large ball in his arms. He may seem incapable of washing and drying his hands, but the reason may be that the equipment is not suited to his strength and reach. He may fail if he tries to saw with a poorly made saw, or hammer with a hammer that no adult would use, whereas he might get a taste of success and a spur to further learning had he a saw, suited to his size, that would bite into the wood, and a hammer designed to be an efficient tool.

The suitability of the equipment not only will make a difference in what a child can do but it may also affect his future attitude toward motor enterprises. Thus, an unsuccessful or painful experience with a hammer that will not hammer, or a swing that soars too high, may discourage a child from further experimentation.

IMPORTANCE OF MOTOR LEARNING

At the risk of being repetitious, it is appropriate again to stress the repercussions of motor activities on other aspects of a child's daily life. Much of a child's increase in self-help during the preschool years takes place by way of his mastery of the motor activities involved in such matters as dressing, feeding, getting in and out of bed, turning lights on and off, bathing, fetching, carrying, tying and untying, pinning, buttoning, opening and closing cupboards, carrying without losing or spilling, taking the telephone off the receiver and putting it on again, avoiding collisions with other persons in the house or on the playground, etc. Progress in these matters is an important feature in the child's growing independence.

Again, as has been noted earlier, a child's social contacts with other children depend heavily upon motor activities. If the youngster is lacking in the skills which figure prominently in children's play, he is barred from many social contacts. When others climb, he remains below; when they use the slide, he can only watch; when they coast on a sled or wade and splash in a pool, he can only look on. Motor activities also figure importantly in many intellectual enterprises: it is partly through manipulation of materials that the youngster acquires concepts of size, shape, number, weight, and gains a working knowledge of gravity, balance, and proportion.

Motor skills also have a conspicuous bearing upon a child's emotional behavior. Through increased control of his physical environment, he circumvents or solves problems which otherwise would thwart him. Where previously he was angry when unable to push a carriage over a door sill or when unable to turn his wagon around in a small space, he now meets these hurdles without trouble. He also will manage many situations which might produce fear. When able to turn on lights, to open doors to let himself in or out at will, to climb up and down heights, to turn off a loud radio, to "catch up" by running if he falls behind on a walk, he has means of coping with situations which otherwise might elicit fear of darkness, falling, noise, being lost, and the like.

While a child's motor competence thus has certain repercussions, it also is true that happenings in other aspects of his life will, on their part, have an influence on his motor skills. For example, a jealous youngster may refuse to do things for himself, not through lack of ability to learn but through a desire to get the kind of attention given to a younger brother. A youngster may fail to acquire or to use the play skills of his age group by reason of shyness rather than lack of ability to master the skills as such. Again, any happenings which produce fear, lack of confidence in self, or distrust in others may bar a child from plunging into activities which he could handle quite ably if he were not emotionally blocked.

INTELLECTUAL DEVELOPMENT

During the period from eighteen months to six years the child comes into his own as a thinking creature. The development of his mind opens up new worlds and widely extends his powers.

THE WONDERS OF LANGUAGE

Mental growth during this period is revealed most strikingly by the child's use of language. He may acquire a vocabulary ranging from several hundred words to several thousand. Through language he can express his curiosity and feed his voracious appetite for information about the world in which he lives. Language also becomes an important tool in his social life, and it serves increasingly as a means of expressing his emotions.

In the progress in the use and understanding of language which occurs during the preschool years we have a demonstration of the remarkable amount of learning achievable with a minimum of formal teaching. Granted someone to talk to, the child exercises his language skills and continually presses into new ground. He acquires new modes of expression and modifies older forms. His speech becomes more articulate. Granted an example of good language, he sloughs off many imperfections or errors acquired on an earlier day, such as misplaced consonants ("B for Bictory"), mispronunciations (pickin' and aminal for picnic and animal), and erroneous (although in many respects quite logical) grammatical forms for number and tense (foots, borned, deaded, etc.).

Though a child's language comes about without formal teaching, a teaching situation is, of course, still involved. Just as he can learn rightly from a good example, he can also learn wrongly from a poor example. As a result, when a child comes to the first grade, he not only may have to learn much that others already know but may also have to unlearn much. Moreover, a child who has had a chance to talk a good deal to adults, or to older children, will have an advantage, other things being equal, over a child not so situated. Further, language development, like behavior, may be influenced by other currents in the child's life, such as shyness, fear of making mistakes, lack of freedom to ask questions, and the like.

THE BUDDING SCHOLAR

Apart from mastery of a large volume of spoken language a child usually acquires many learnings related to reading and writing before he reaches school age. If given a chance, he learns many uses of books. He becomes able to identify innumerable pictures, to follow a simple story told by pictures, to page through a book, to hold it right side up, and to follow the contents from left to right across the page. Many children also, without anything resembling systematic training in reading, learn to identify a number of letters and words. A small percentage will make strong efforts of their own to learn how to read, and will acquire considerable amount of competence before they reach the first grade.

A WORD ABOUT READING

The subject of reading as an educational problem will be considered in Chapter V. It suffices to say here that on the basis of available evidence the teaching of reading as a systematic project is not timely for most children of preschool age.

This does not mean that we should bar children from contact with a number of "prereading" activities, such as those mentioned above. Nor does it mean that we should go out of our way to divert a child who shows unusual aptitude for reading unless, by chance, such a child might be using reading as an escape or a substitute for other wholesome activities. It does mean, however, that we should not be ambitious to push children at this level into reading. On the one hand, to press the child prematurely may build up unfavorable attitudes toward reading. On the other hand, given time to mature, the youngster at a later age is likely to learn in a short time, and with less effort, all he might earlier have learned at the expense of much time and labor.

REASONING

From an adult point of view, one of the most gratifying features of intellectual progress during preschool years is the development of the child as a person with whom one can reason. Increasingly from two to six the child becomes able to understand and accept the reasons for things. Increasingly, also, he acquires the ability to give reasons for his own stand. To be sure, he is not at six, nor will he ever be, a creature who fully understands the logic of things. Nor does he ever become a creature who will be governed solely by reason, even in matters that he does understand. But by the age of six he is able to deal with much of life on a level of ideas.

The child's increasing ability to grasp reasons and to give reasons of his own has many consequences. When earlier he had "reasons" in the sense of unphrased motives, desires, or wishes, often difficult for an adult to fathom, regarding what he wanted or did not want, he now can express himself verbally, at least in part. True enough, the reasons he gives after he has become articulate are sometimes as baffling to an adult as were his unspoken concerns of an earlier day, but at least there now is an opportunity to talk things over.

One result is that a number of everyday happenings can be made to seem more reasonable both to the adult and to the child. For example, a youngster at eighteen months may refuse the oatmeal which usually he eats with relish. His puzzled mother thinks he is either quite perverse or off his feed. Actually the mother may have forgotten to put the customary salt in the oatmeal and the child does not like the flat flavor. At six, and even before then, the same child can explain, and the issue can quickly be settled with a pinch of salt.

Examples could be multiplied many times in connection with the practical details of parent-child relationship. One result of the child's increasing ability to understand is that much which earlier must have struck him as arbitrary now can be made to seem reasonable. Another result is that the child can learn, at least in some matters, to accept the inevitable. Where earlier, for example, he would complain if his pudding dish were empty and refuse to accept the fact that there simply was no more pudding, he now can appreciate the fact that strong protests cannot create pudding. This example illustrates one of the many little lessons which contribute to acceptance of reality. While we recognize this, we must also recognize that although some lessons of this sort are learned by the age of four or five or six, many other lessons in the acceptance of reality still remain to be learned at ten or twenty or sixty or eighty. With the changing tides of life, new issues present themselves and the individual is repeatedly called upon to understand and accept the forces that are at play.

ADVANCES IN THE FIELDS OF LOGIC AND SCIENCE

Along with increases in the child's ability to see the reason in matters which directly affect him, there also are advances in his ability to understand the logic of things in the world at large. At six his fund of information is, of course, quite limited as compared with his knowledge of later years, and, in consequence, his insight into the workings of the world will be spotty. But, when on familiar ground, he is capable of both deductive and inductive reasoning and can grasp the notion of cause and effect.

This does not mean, of course, that he approaches every problem with scientific acumen. The child who gives a rather logical answer to one question may give a fanciful answer to another. Thus, when he sees a pebble dropped into a beaker of water and the water rise and overflow, the five-year-old's explanation may be that the stone takes up room or takes the place where the water was. This gives a good naturalistic account of the phenomenon. The same child, on another question, may give an answer that seems artificial or unscientific, such as that clouds stay up in the sky because they're hooked to the sky or maybe a giant holds them up.

Thus, while the child at six, and also before that age, is capable of reasoning of the kind involved in the thought processes of adults, he is not, of course, scientific or logical in his approach to all things. He gives play both to logic and to fancy, to disinterested reasoning and to wishful thinking. He may play in with the notion that it is Santa Claus who fills his stocking and yet shrewdly remind his father and mother not to forget something that he wants for Christmas. His grasp in some matters may be wise and in others his notions absurd and bizarre. The same holds true, of course, of older children (and adults). The older child, with a larger store of knowledge and a larger fund of experience, can reason effectively about many things which would have stumped him at the age of four or six. But he is also likely to resort to a variety of illogical and unscientific answers when faced with problems beyond his depth.

From an educational point of view it is important to appreciate the fact that the preschool child is a reasoning creature, and yet recognize that the range of his knowledge and his concern with matters in the large affairs of the world are limited. While he occasionally makes comments about abstract and remote events (such as inquiry about the meaning of abstract words or questioning about happenings in distant places during a time of war), most of his intellectual concerns lie close to home.

Within this territory, however, he learns a tremendous amount. Given opportunity he can build up a large fund of information in the spheres of human relationships, nature study, mechanics, community life, occupations, and the like.

CHILDREN'S QUESTIONS

The accumulation of knowledge during preschool years takes place both through countless incidental impressions as well as through the child's own active efforts to learn. As soon as he can say a few words, and even before he can speak in sentences, he launches a barrage of questions. His inquiries become increasingly complex and varied as he grows older. Although a mixture of motives, including a desire for attention, may come into play, his questioning serves mainly to express his curiosity and to obtain food for his intellectual appetite. His parents are pressed into service as teachers and he views other friendly adults as fair game.

The handling of these questions by adults is a very important feature of the education of the preschool child. The job involves a good deal more than simply handing out items of academic information. The attitude of the answerer is in many ways as important as the answers supplied.

This is all the more true by reason of the fact that many emotional currents enter into the question-answer situation. The adult may be sorely tried when, at times, the child's questions seem unduly stupid or perverse, or when he repeats the same question again and again, or questions and then seemingly fails to listen, or shows annoyance when the adult tries hard but fails to get the point of the question, or continues to push his inquiries after the adult has become weary. Again, the adult may rebuke rather than encourage the child's quest for knowledge by being very condescending or sarcastic or by treating a serious question as a joke. Further, if the adult is evasive or intellectually dishonest, he may not only weaken the child's confidence but induce the child to go elsewhere for his answers. In this matter as in others the adult must exercise common sense.

The child's curiosity during this period is expressed in other ways than direct questioning. He usually is eager to go places and see things, to examine the contents of closets, shelves, and drawers, to inspect new objects, to open packages, to try his hand with gadgets about the house, and the like. Moreover, he may pursue a line of study over a period of time in rather mature fashion, as when a four-year-old repeatedly goes to a low hanging bird's nest and watches while the nest is being built, the eggs are being hatched, and the fledglings are being cared for.

THE MATTER OF ATTENTION SPAN

While the youngster of preschool age pursues an active career of learning, many of his efforts will be of short duration. On occasion he will stay with a project for an hour or more, but most of his enterprises at the age of two, and many at the age of six, hold him only momentarily. At two, for example, he may start across the room with his eyes on his doll carriage, but midway he may notice a ball, pick it up, and veer off in another direction. This shifting appears not only in "mental" activities but also in the physical sphere: in listening to an interesting story, for example, the young child is likely to shift his position from time to time. Regardless of how intensively his mind is occupied, he has less capacity for sitting still than is shown by an older person.

The ability to concentrate, variously called "attention span," "concentration span," and "persistence," is a matter of much importance from an educational point of view not only at the preschool level but at later levels. It is not possible to present a single precise norm or average for all ages. One reason is that the child's attention span will vary in different situations. Again, any average that emerges from a series of timed observations may have little meaning since it is likely to represent periods ranging from a few seconds to over an hour. Moreover, studies dealing with attention span have been conducted in different settings and have used varying criteria of what constitutes the end or interruption of an activity. Even so results from such studies are instructive in indicating substantial increases from year to year when similar observations and criteria are applied at different age levels.

In one investigation, the average duration in minutes of sustained attention rose from 6.9 minutes at two years to 12.6 at five; in another study, there was a rise from 9.4 to 23.82 for the same period; in a third, there was a rise from 2.5 at two to 5.6 at four. It is interesting to note that according to these studies, all utilizing different settings and criteria, the attention span approximately doubles from age two to age four.

FACTORS INFLUENCING PERSISTENCE

Inasmuch as attention span or persistence is influenced by a variety of factors, it is not possible to lay down a general rule for the timing of activities at the nursery school and kindergarten levels. Even if data were available concerning the average span in a variety of different undertakings, the adult would still have to use his judgment in gauging what the traffic will bear. He must give heed to a number of considerations. First, motivation is of supreme importance. The more an undertaking ties in with the child's own concerns, the longer the period of concentration is likely to be. Again, the child's persistence might be influenced by conditions such as fatigue, hunger, effects of past illness, and the like. Further, his ability to concentrate will be affected by distracting emotional problems. His persistence will also be influenced decidedly by experiences of success and failure. His efforts will lag sooner if he has no awareness of progress or accomplishment. By the same token, he is likely to persist longer if the project is so arranged that he can get a taste of achievement almost from the start.[1]

Make-Believe

Make-believe serves many functions in the child's development during preschool years. It also serves many purposes as he goes about his business from day to day.

Evidences of make-believe appear almost as soon as a child can talk. Indeed, some children will respond to imaginative play or take part in imaginative play, such as joining an older person who pretends to bark and act like a dog, before the the idea of being a dog can be communicated to them in words.

[1] Additional comments about attention span appear in Chapter V.

MANIFOLD FUNCTIONS OF MAKE-BELIEVE

Make-believe serves as a way station to reality. Through make-believe the child can go beyond actualities in dealing with persons and things. He can overcome limits of time and space. He can wield powers and enjoy possessions that real life has not provided. This enables him to extend the boundaries of his experience, to gain practice in dealing with situations without assuming responsibility and without being bound by rules of logic. He can repeat, test, and consolidate impressions that he has gained concerning the ways of the actual world.

Make-believe also enables the child to express his emotions and to gratify his desires in ways that may be denied to him in real life. He can "take out" his anger on a doll. He can love and comfort his "baby" without stint. He can have "chocolate cakes" to his heart's content. He can relive, and to some degree cope with, his fears, as when he assures his Teddy bear that "those dogs won't bite."

Make-believe also plays an important role in the child's social life with other children. Much of children's play with one another revolves around make-believe themes. Such activities not only provide a common enterprise but also offer a means of practicing the techniques of social intercourse, of performing as a leader or a follower, and of enacting various roles involved in family and community life. Through make-believe a child may also win his way into a group, as when he assumes leadership by virtue of his ability to suggest attractive ideas for play, or if, when left out of things, he finds his way into a group by accepting a humble role, such as being the "baby" or the "patient" whom the "doctors" and "nurses" can ply with "castor oil," "mustard plasters," and "ice packs."

The child's ability to enter with zest and feeling into make-believe situations gives a spur to many forms of intellectual activity. It adds relish to stories that he hears, whether these be fanciful or accounts of actual creatures, places, and things. This capacity for vicarious experience is a spur to the use of language. It eventually provides for some children part of the incentive to learn to read. Again, the ability to participate on a level of "pretend" adds to the appeal of artistic activities—dramatics, singing and dancing, drawing and modeling.

ADDED HAZARDS

While the child's powers thus are supplemented, so to speak, by his ability to project himself into imaginary situations, the same ability also makes him vulnerable. This can be seen notably in connection with children's fears. As the child becomes able increasingly to imagine, he becomes susceptible to fears of imaginary dangers. At two a noise in the dark may be just a noise. At six this noise may be embroidered with sinister meanings. Again, even without the noise he may be able to people the dark with imaginary creatures. One result is that the child's fears, as he becomes older, tend to focus relatively less on tangible things in the immediate environment and relatively more on dangers of an imaginary sort.

SELF-REVEALMENT THROUGH MAKE-BELIEVE

Just as imaginative activities play an important role in the child's everyday life, so also are they important from an educational point of view. These activities help to reveal the child—his thoughts, concepts, interests, and emotional concerns. In recent years a number of procedures have been devised to capitalize on the fact that a make-believe setting may elicit expressions of thoughts and feelings which the child might not reveal if he were directly questioned or if he were observed only when engaged in prosaic activities. The name "projective techniques" has been given to procedures providing a situation in which a child can "project" or act out his feelings by way of an external situation.

Thus, he may be asked to enter into a "housekeeping game" which presents to him miniature kitchen equipment and dolls representing a mother and an older and a younger child. One child in such a situation placed the children (dolls) on the kitchen stove and then proceeded to "burn" them. This act, in the light of other facts known about the child, seemed to express the youngster's jealousy toward a younger sibling.

Story-telling, drawing, painting, dramatic play, and the use of a variety of playthings, such as blocks and balloons, have also been utilized as projective techniques. Procedures such as these may throw light on a child's inner life or provide a clue which can be followed by other lines of study. It should be emphasized that caution must be used both in applying these techniques and in interpreting the child's responses. Use of these procedures requires a good deal of training and experience and should be supplemented by other methods of study and other sources of information.

The child's make-believe can be used to gain insight into his mental life not only by way of staged situations, such as those described, but also by way of observing his spontaneous make-believe as he goes about his own play. Here, too, it is necessary to be cautious in interpreting the child's make-believe behavior. Moreover, it usually is necessary to have a good deal of other information about the child in order to get an authentic picture. But even if the make-believe activities are used only as supplementary data, so to speak, such data may at times be very useful. One thing to remember is that imaginative activities, whether in the form of make-believe, fantasies, daydreams, or dreams, do not "just happen." These products of the imagination may represent bizarre, illogical, and quite impossible situations, but they still are products of the impressions, thoughts, and emotions involved in the experiences of everyday life.

USE OF MAKE-BELIEVE IN ADULT-CHILD RELATIONSHIPS

The child's make-believe not only may provide clues to his inner life, but may also be utilized for practical purposes in everyday dealings with the child. There will be many times when the child's cooperation can be gained by way of make-believe. If, for example, the youngster is playing at being a bus driver and it is necessary for the adult to interrupt, the child may respond favorably to the suggestion that he "park" his bus or that he leave the game "as soon as all the people have gotten out of the bus," where a more prosaic demand would go unheeded. There are countless situations in which an adult can enter partially into the child's make-believe and establish rapport, promote companionship, or give such instruction or advice as the child may solicit.

There are times, also, when an adult can enter wholeheartedly into a make-believe situation to help a child. This can be observed, for example, in connection with children's fears. The mother of one child who had in some way acquired a fear of an imaginary dog entered into the child's play and accepted the "dog" as a reality, bringing it more and more into the play. In time, through dealings with this "dog" in a number of pleasant situations, the child's fear appeared to wane. Another mother similarly incorporated a closet, which the child feared as the locale of imaginary dangers, into her play with the child, with good results.

By taking advantage of the opportunities offered, an adult can also utilize make-believe to help children to establish social contacts; for example, the "pilot" of the boat, at the teacher's suggestion, may ask a certain withdrawing child to come into the boat as a sailor. Again, a make-believe setting may enable the adult, by example, to instruct a child in many social amenities which the youngster can use to good advantage in his actual dealings with other persons. Examples of such usages could be multiplied indefinitely.

MAKE-BELIEVE AND ART

Many opportunities as well as certain questions of policy arise in connection with children's use of imagination in their artistic activities. Much of the "creativity" of the preschool child represents an expression of his imagination in tangible form. Sometimes his "creative" work takes the form of fanciful embroidery; at times it represents an original integration of ideas. Often a child uses his imagination as an afterthought to supply a name to a painting or other work of art when it is finished.

In all of these ways, imagination serves a useful end. In his artistic activity, as in the larger aspects of his play, his dealings with persons, and his contact with the world, a child's imagination gives him freedom to practice, to explore, to try for effects. His imagination also helps provide interest and zest. The exercise of imagination is important, of course, in all forms of art at all levels of maturity, but it is especially helpful when the child first begins to try to paint, to dance, to improvise tunes, to try his hand at architecture with sand and blocks. The more the child is freed from the exactions of reality and the demands for refined techniques, the freer he will be to practice the elementary skills involved in the various forms of art. It is important for him to try his hand, to derive satisfaction from what he does, and to have the incentive to go ahead.

The Preschool Artist

In the foregoing, the subject of art was touched on by way of the discussion of children's imaginative activity. This subject involves a number of other important considerations.

THE LURE OF THE ARTS

At the age of three and thereafter the preschool child, if given an opportunity, spontaneously devotes a good deal of his time to artistic activities. If supplied with crayons, paints, and scissors, he will plunge into coloring, drawing, painting, and cutting. With the slightest encouragement he will display his products and distribute them as gifts and, if he is not rebuffed, he will occasionally ask for advice and suggestions.

Similarly, if given an opportunity, he will throw himself into rhythmical and musical performances. He will march and dance to music, take the role of a drum major and band leader, imitate the playing of drums and the blowing of bugles. He likewise begins to express aesthetic interests, quite often on a modest scale, in working for effects with doll clothes and ribbons and with other articles of personal adornment.

TO TEACH OR NOT TO TEACH

One important issue that arises in connection with children's experience in art both at home and at school is how much adults should try to suggest and teach and how much they should use a hands-off policy.

Anything that is said about the role of the teacher in children's art is likely to arouse debate. This is all the more true for two reasons. First, there are few good scientific findings with regard to the functions of the teacher, notably in the graphic arts. Second, adults who are interested in the matter often have decided personal opinions that reflect their own notions of what is "art" and their own particular artistic interests or talents. As against the practice, at one extreme, of insisting on formal exercises and drills according to standard models, there is the view, at the other extreme, that a child's artistic activity is the most sacred of all cows in the pasture of development, that any attempt to stimulate or guide artistic activities is likely to inhibit the child's own creativeness or to promote antagonism.

The issue is further complicated by the fact that children differ in their artistic abilities and inclinations. If adequate scientific data were available, it undoubtedly would be shown that no single recipe would be suited to all children. Such data as are available indicate that individuals differ in their imaginative qualities, in their musical and rhythmical abilities, and in the ways in which art functions in their lives. They differ also in aesthetic inclinations. At an early age one child, for example, is much more fascinated than another by poems and songs. He may enjoy the rhythm; he may supply, mentally, a flow of images when he hears or repeats a poem. Another child may revel more in imagery in graphic form.

The issue raised above cannot, of course, be answered in either-or fashion. Certainly we should maintain a hands-off policy if that is the only way to safeguard the child's spontaneity and to preserve his enjoyment of the arts. Art ceases to be art, something valuable for its own sake, when it becomes a struggle to follow directions and to meet standards set by others. One child's barely recognizable drawing of a horse may be a more genuine work of art than another child's drawing that is almost perfect in all its details. From this point of view, better a crude but zestful artist than a skillful but cold-blooded craftsman!

OPPORTUNITIES TO ACHIEVE

Artistic interests, like other interests, thrive on opportunities to achieve. This does not mean, however, that the adult must not take a hand and help the child. If a child is given a chance to learn in a favorable setting, the very thing that he has learned is likely to provide a basis and an incentive for further learning. In two studies of children of preschool age it was found, for example, that youngsters who were given a chance and encouraged to sing tones or phrases which they could not previously sing not only made remarkable gains in their singing but also gained in their enthusiasm for singing.

Given a voice, a child of his own accord will sooner or later try to chant or sing. This is in keeping with the principle of spontaneous use noted in an earlier section. But this original impetus will be strengthened if the child is helped to discover the possibilities that lie before him. The satisfaction derived from singing the tunes and chants in his repertoire at the moment can be enhanced if he is helped to sing additional tunes, to master additional phrases and melodies. This will result in opening up to the child a larger world of song.

The teaching which helps a child who is ready to move on into higher reaches of skill in the use of his voice is not likely to succeed by way of colorless exercises and repetitious drills. In one of the studies mentioned above, the "training" in singing which succeeded so well was incorporated into the setting of games, horseplay, shenanigans, and make-believe projects which depended for their success as much on the artistry of the teacher as on the capacity of the children.

The value of an opportunity to practice and to gain competence appears also in a study of rhythmic activities of preschool children. It was found, for example, that some children, once they had had an opportunity to master the simpler steps involved in keeping time to a piece of music, would move on to a further phase of improvising variations of their own.

In connection with the preschool child's endeavors in drawing, painting, modeling, block construction, and the like, there likewise will be occasions for teaching. In these activities, as in others mentioned above, the first essential is to provide an opportunity for the child to try his hand, to experiment and to practice in his own way, and to gain the satisfaction which can be derived from even the crudest performance.

It is of first importance that the child have a chance to cultivate and preserve his taste for these activities. Criticism and efforts to compel the child to strive for effects beyond his ability can readily convert into a chore what once was a spontaneous enterprise. If the child is held to standards he cannot achieve, he will also have an experience of failure which certainly is not conducive to further learning. This still leaves the door wide open for adult participation. In their drawing activities, for example, many children at four years and thereafter will solicit suggestions from an adult who has followed their work with interest. They may ask the adult to show them how to draw a certain flower which they wish as part of a landscape, how to put a door in a house, or they may ask for advice in connection with an uncompleted drawing. In painting, they are likely to welcome suggestions on how to mix paints and how, by cleaning the brush, to avoid mixing them, or how to keep the paint from running, dripping, and so on.

NEEDED RESEARCH

Although a large volume of research has been done in the field of art at the preschool level, it does not begin to offer the basis for an art curriculum. It would be helpful if the knowledge and experience of teachers of children at this age level could be made more articulate. There is need for systematic information not only on children's ability to appreciate and perform but also on the kind of materials best suited to various maturity levels and the kinds of projects best adapted to integrate art with other experiences.

There is need also for research regarding the ramifications of art in the emotional, social, and intellectual lives of children. As already suggested, artistic activities may sometimes serve as an emotional outlet or as a means of expressing emotion in tangible form. Again, limited observations indicate that children's social adjustments can sometimes be improved through the medium of artistic activities. A shy child, for example, might be brought into the swing of things through lively music which gave him an opportunity to join with other children in a common activity. An experienced teacher will be aware of many of the possibilities in this area, but there is need of a more systematic description of ways in which these possibilities can be realized in concrete and tested situations.[1]

EMOTIONAL DEVELOPMENT

The story of emotional development during preschool years is a continuation of the story begun in early infancy. Changes take place along two major lines. First, as the child's abilities and interests expand he is able to cope with many situations which aroused him at an earlier time, but at the same time he becomes vulnerable on new fronts. Second, during preschool years children's expression of emotion tends to become less violent and explosive and more refined, subdued, or furtive.

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[1] Certain additional issues pertinent to art education at the preschool and later levels are discussed in Chapter V, The Elementary School Child.

EMOTION IS INVOLVED IN ALL THAT LIFE INVOLVES

The subject of emotion has appeared repeatedly in the foregoing discussion of various aspects of the development of the preschool child. Feeling and emotion are interwoven and intertwined with all aspects of the child's life. The free expression of the impulse to activity may give pleasure; the blocking of this impulse may arouse anger; the loss of anything that has fitted into the customary way of life may arouse grief; the threat of loss or of pain, or the possibility that anything valued may be destroyed, may cause fear. Similarly, the child may be frightened by any sudden or intense stimulus that catches him unprepared or at a loss how to proceed. As the child's powers expand, as the range of his activities widens, as his undertakings increase in scope and complexity, there is a corresponding expansion in the variety of issues capable of arousing emotions of a pleasant or unpleasant sort.

Since references to the interlocking of emotion with other aspects of a child's behavior have been made repeatedly in the foregoing sections, the present treatment will not offer an additional comprehensive account of emotional behavior at the preschool level. There are, however, a few points that deserve reiteration or emphasis.

INCREASINGLY INSCRUTABLE

One problem confronting parent and teacher alike is the increasing difficulty in understanding the emotional behavior of children as they grow older. With the expanding of the child's mental operations, motor abilities and social activities, the circumstances that arouse his emotion become more and more complex. As he develops in the direction of more subdued, subtle, or indirect expression of emotion, it becomes more difficult to fathom his feelings and, even when he shows emotion, to understand the cause.

The situation is further complicated by the fact that the child's emotions will be influenced not only by immediate occasions for joy, anger, or fear, but also by past happenings and by his anticipation of events that might lie ahead, such as the possibility that he might meet a certain dog if he went for a walk. Further, he will be affected not only by a particular happening but by the cumulative effects of past experience. The state of his feelings will also be influenced markedly by his physical condition: when hungry, some children will become enraged by setbacks that ordinarily would not bother them; when sleepy or ill or fatigued they will become angry, or apprehensive, or depressed by happenings that normally they take in their stride.

EMOTIONAL BY-PATHS

Adults must constantly remember that a child's emotion may be aroused in devious ways or may turn on issues that do not appear on the surface. For example, a four-year-old girl was firm in her refusal when asked by her mother to go to the basement to get a pair of shoes which she had carelessly left there. When pressed she became quite angry. But back of this anger, the mother realized was fear. More than a year earlier the girl had been startled and frightened when the door to the basement stairs blew shut with a bang. Since then she had been uneasy about the stairs and the basement. She now faced the issue, not by an obvious display of fear but by a display of anger. An adult, in this situation, might unknowingly bring to bear pressures which would make the child even more apprehensive of the basement.

The fact that motives which adults easily fail to recognize may underlie a child's emotional behavior can be seen at times in very homely and simple situations. A girl of about five years insisted at bedtime that her mother remove some nail polish which the mother, in a moment of gaiety, had put on the youngster's toenails. To do this at the time was inconvenient since the mother was also busy putting a younger child to bed. When the mother demurred, the girl became annoyed, but the mother was able to settle the matter quite amicably. By chance she had earlier glimpsed the child playing with the almost empty bottle of polish remover, and she guessed that the youngster really wanted the polish removed so that she could have the odd-shaped bottle. Instead of taking issue with the child's demand as expressed, the mother simply promised that the youngster could have the bottle when it was empty, and this settled the matter.

In the everyday life of the child there undoubtedly are countless emotional situations analogous to these, in which adults fail to detect the child's motive or purpose. In many such situations the adult's failure to understand may not be a serious matter. Nevertheless, the complexity of the factors underlying emotion, even in rather simple situations, offers many opportunities for misunderstanding.

It is important on account of this possibility of misunderstanding that the basic relationship between adult and child be friendly and affectionate. An attitude of affection will go far to cushion the effects of misunderstandings that arise even in the most loving home. If there is lack of affection, misunderstandings are likely to be all the more frequent, since almost any happening can be made a pretext for conflict between adult and child.

The issues are frequently a good deal more complex than the illustrations indicate. A child may, for example, weep and protest that he does not want to go to nursery school. There may be a new baby—and the child is apprehensive or jealous, or he may feel impelled for one reason or another to cling to his mother. Again, a popular youngster may, for example, be waging a losing battle with a newcomer who is attracting a good deal of attention in the group and his emotional reaction may take the form of wanting to stay away from school.

EFFECT OF EMOTIONS AND ATTITUDES OF OTHERS

While the emotional life of the preschool child is exceedingly complex, and the scope of the emotional concerns of the three-, four-, or five-year-old has expanded tremendously beyond the concerns of infancy, it still is important to remember that the preschool child is a baby in many respects. He continues to be highly dependent upon his elders for both physical and emotional support. The momentary upheavals and shifts in his general mood will be much affected by the emotional climate created by others.

We have already emphasized the importance of a general background of affection. Similarly, the child will be affected by the extent to which the atmosphere in which he lives is clouded by worry, punishment, or gloom, or is brightened by happier rays. He will be affected also by other more particular features of the emotional environment established by others. For example, his fears are likely to be much influenced by the fears he sees exhibited. There tends to be a rather high degree of correspondence between the fears of a child and those of his mother. Again, in any frightening situation a child's immediate reaction of fear and the intensity of the after-effects of the experience are likely to be influenced by the degree of fright or composure manifested by his elders.

ADULTS, TOO, HAVE A RIGHT TO BE HUMAN

While the moods and emotions of others thus can affect the young child, it does not follow that adults should assume a false front in order to shield the child. To be sure, the adult should bear in mind the influence of his emotional behavior.

The very fact that an adult bears this in mind and tries to govern himself accordingly is likely to be to the good. But however mindful the adult may be of his responsibility, he still is an emotional creature himself and he has a perfect right to be. He will be irritated and annoyed at times; he will be startled or frightened on occasion; he will be subject to some of the worries and sorrows that are the lot of every normal human being. A policy of complete concealment of such emotions would eventually betray itself. Moreover, if an adult always struggles to keep the lid on his own feelings he may, in the process, create more tension for himself and others than he would if he felt free to be his natural self. Further, a policy of complete concealment of fear, for example, might do much more harm than good; in subtle ways it might have the effect, especially with a bright child, of causing him to try to conceal his own fears or of causing him to be ashamed that he is afraid.

In like manner, a policy of deliberate deceit or a squeamish hush-hush attitude—such as concealment of facts of illness or death which the youngster eventually will discover anyhow, or elaborate efforts to shield the child from the fact, say, that his elders are sad because of a loss or are disappointed by a turn of fortune—is more likely in the long run to cause uneasiness or lack of "security" than a forthright way of dealing with such matters. This does not, of course, free the adult from his responsibilities. He should try to spare the child from emotional scenes that are beyond his ability to understand or endure. The adult should also try to keep his own emotional house in order. While he should be free to share his emotions with others in the give-and-take of everyday life, it is his responsibility to help carry the child's emotional burden rather than to put the burden of his own emotions upon the child.

EDUCATIONAL SIGNIFICANCE OF DEVELOPMENT DURING PRESCHOOL YEARS

The point has been reiterated that the development of children during the pre-elementary school years is a matter of importance not only to adults concerned with the rearing and education of children but also to persons concerned primarily with the education of children in the elementary and high school grades. Nearly all the goals we seek in the education of older children must be achieved by way of education that builds upon the foundation of habits, skills, attitudes, emotional tendencies, and "personality" traits established before the child reaches the first grade. This does not mean that the child's ways of behaving are rigidly set by the age of about six. In the process of maturation beyond the age of six new capacities and drives emerge as well as new hurdles and hazards. Changing forces within the child himself and changing opportunities and pressures in the external environment come into play. As a result, there will be important changes in his way of behaving.

But the impact of the new will be influenced by ways of behaving already established. A child's adjustment in the first grade will be influenced strongly by what has gone before. His adjustment in the first grade, in turn, will influence his adjustment in later grades. In passing it may be noted, on the negative side, that a large proportion of pupils who are described as "problems" in the fourth, fifth, or sixth grade have a history of "problem behavior" extending back to their first year in school. On the "normal" side, the qualities of personality which distinguish one child from another before youngsters enter school show a high degree of persistence during ensuing years.

NEEDED RESEARCH

The need for research—research combining the interests of the student of child development and the practical interests of the educator—is especially acute at the kindergarten level, or the age level extending from about four and a half to six years.

Many systematic developmental studies taper off beyond the age level of four. On the educational side there is a huge volume of literature dealing with the purposes and the specific projects and activities involved in a kindergarten program. Many of these practical proposals of what the nursery school and the kindergarten curriculums should contain have not been appraised by systematic research studies.

At these levels, however, as at all educational levels, the educational program would be indeed threadbare if it built only upon tested scientific data. If we could, by some magic, tap the wisdom that kindergarten teachers have acquired through long actual experience with children, we would have a fund of information surpassing anything offered by formal research studies. Unfortunately, much of this wisdom is inarticulate. Many teachers know a great deal which, if formulated into clear-cut generalizations for others, could be put to practical test.

CHAPTER V

THE ELEMENTARY SCHOOL CHILD

The first day in the first grade is an important milestone in the lives of most children. Not many have had the experience of attending school at the kindergarten level and fewer are veterans of nursery school. For a large proportion even of those who have gone to kindergarten the day is a momentous occasion. It marks the child's first step on one of the long roads leading away from a mode of life that centers primarily in the home to a mode of life that increasingly puts the child on his own in the affairs of the larger world.

To many parents, too, the child's first day in the first grade is a momentous event. The child who was their baby is now in the custody of someone else during a large number of his waking hours. Even where close relations between home and school prevail the child's life at school represents something quite distinct from his life at home. The fact that the child is now beginning his formal schooling also forcibly reminds parents that their youngster is growing up, that he is starting on a course which eventually will carry him away from his moorings in the home toward an independent career of his own. It is no wonder that many parents feel a tug at the heartstrings as they watch their child go forth.

DEVELOPMENTAL GOALS

In this chapter will be discussed some of the developments during the age range from about six to about twelve that are especially significant from an educational point of view. By way of introduction some of the major features of development during this span of years will be sketched.

INTELLECTUAL

A prominent feature of mental development from six to twelve years is the expansion of the child's intellectual horizons. At six the child's thoughts turn primarily upon happenings in which he personally is involved. At twelve he is still absorbed with personal concerns, but his ideas also embrace events in the world at large; he is interested in current affairs and is able to discuss them with some understanding. At six his mind dwells mainly upon the immediate or upon events that are quite recent or will occur in the near future. At twelve he has some grasp of the historical past, and some of his plans are likely to have reference to a somewhat distant future. From six to twelve the child also makes huge strides in his ability to think in terms of the abstract as against the concrete.

The period from six to twelve is outstanding as the period during which the child acquires the capacity and, with the aid of schooling, the ability to master the major symbols of our culture by way of reading, writing, and the manipulation of numbers.

During this period the child also gains in ability to perform simple mental operations with increasing speed, to deal with problems of increasing complexity, to bring an increasing number of associations to bear upon a problem, to persevere in a task, to plan and see his way through the chores and the spade work subsidiary to his plans, and to acquire sustained interests of his own. He gains in ability to be a "self-starter," to take thought before action, to weigh pros and cons.

In the moral sphere he moves toward appreciation of rules of the game and rules of ethics as precepts that he regards as his own rather than as edicts imposed solely by his elders.

A prominent feature of development in the mental sphere, paralleling an advance in the social sphere, is a marked gain in the child's ability to take part in intellectual teamwork—to join with others in a logical discussion of an issue or a topic.

MOTOR

The period from six to twelve is conspicuously a time when the child's motor interests and abilities flower and flourish. Healthy children of this age are on the go much of the time. They seem to possess almost boundless energy. Their urge to activity expresses itself not only in games and contests and in a variety of complex skills but also in running, jumping, tussling, chasing, and in other activities that seem to function as though activity were an end in itself.

SOCIAL

In the social sphere in the age span from six to twelve, the child gains the ability to enter into complex forms of teamwork and he comes increasingly under the sway of the customs, manners, opinions, and values of his own age group.

EMOTIONAL

In the emotional sphere the child's susceptibilities expand with the expansion of other aspects of his make-up. The tendency toward more moderate or subtle expression of emotion, already well advanced during preschool years, continues.

INTELLECTUAL DEVELOPMENT

CHANGES IN INTELLECTUAL ORIENTATION

Some of the major trends in mental development during the elementary school years are well illustrated by studies that compare children of various grade or age levels. In one such study records were obtained of the contributions of children in the second, fourth, and sixth grades during periods of "free discussion."

One comparison took account of pupil comments that dealt with immediate personal activities and experiences. In the second grade 61 per cent of all contributions dealt with personal activities and experiences; in the fourth grade 41 per cent were in this category, and in the sixth grade, 18 per cent. In the second grade 83 per cent of all contributions dealt with matters that involved the child's "personal presence" or direct contact. In the fourth grade 52 per cent were in this category, and in the sixth, 27 per cent.

The reverse of this trend appeared in connection with comments that dealt with world and domestic news and with the activities of people other than the spokesman himself. In grade two only 18 per cent of the comments dealt with matters in this category. In grade four the score was 29 per cent, and in grade six, 60 per cent.

These findings illustrate in quantitative terms the extent to which the child at about the age of seven is predominantly occupied with his own immediate personal affairs not only in his private thoughts but also when he is holding forth before a group. They illustrate how the child, with advancing age, moves into the larger universe of discourse and shows an interest in affairs which extend considerably beyond the range of his own personal experience. To be sure, the child of twelve, like the youth of eighteen, or the oldster of seventy, is still preoccupied with himself. But he is able to embrace within himself an extended array of concerns and he is able also to put immediate personal concerns aside at times when he enters into discussion with others.

CAPACITY FOR INTELLECTUAL TEAMWORK

The same study also illustrates how children, as they grow older, become more capable of a meeting of minds. Contributions were studied from the standpoint of those that bore no apparent relationship to what earlier contributors had said and those that carried on a theme or chain of thought introduced by preceding contributors.

In the second grade 87 per cent of all contributions represented a "new topic," with no apparent logical continuation of what had gone before. In the fourth grade 33 per cent of the contributions were in this category, and in the sixth, 23 per cent. These findings demonstrate the difficulty children of beginning school age have in joining in a common intellectual pursuit that involves a give-and-take of ideas of an impersonal sort. They also illustrate the extent to which ability to take part in intellectual teamwork may be acquired by the time a child is twelve years old.

CHANGING OUTLOOK ON THE WORLD OF PEOPLE

The extension of children's interests beyond their immediate personal affairs is demonstrated also when children at different age levels are asked to name the person or character whom they admire most or whom they would choose as their hero or ideal. In one study it was found that over half of the heroes and ideals named by six-to-eight-year-olds represented characters from the immediate environment. At nine years, the percentage was 45, and by twelve years it had dropped to 30. On the other hand, historical characters or contemporary public characters with whom the children had no personal contact represented about a third of the heroes and ideals named at six to eight years, and about two-thirds at twelve years.

INCREASING ABILITY TO GENERALIZE

As the child matures he becomes increasingly able, in his thought processes, to go beyond the discrete and particular to the more general and inclusive. An illustration of this appears in a study in which children were asked to give three wishes.

At the five-year to six-year level, 55 per cent of the wishes dealt with specific material objects. At eleven to twelve years, only 14 per cent dealt with specific material possessions. In the intervening years, children had become increasingly able to generalize and to understand, for example, that a single wish for a large sum of money would provide for things—such as a water pistol, a bicycle, and a swimming suit—each of which might be mentioned earlier as a separate wish.

In results such as the foregoing it is well for the educator not only to be aware of the expansion of interests and ideas that has taken place by the age of twelve but also to note, by the same token, that the preoccupations of the child in the early school grades are confined to matters quite close to his everyday life. Moreover, as will be shown below, even though the average twelve-year-old exhibits much interest in current, impersonal affairs as compared with a relative lack of such interest at six or seven years, the twelve-year-old is still likely to have quite vague or inaccurate ideas about many topics and issues relating to the life of the adult world.

THE CHALLENGE OF RESEARCH FINDINGS

What research tells us concerning the "content of children's minds," the nature of their interests, and the range of their understanding has many important educational implications for the social studies as well as other subjects. What ground should we try to cover in the "social studies," what materials should we include, and what outcomes may we expect?

Various lines of evidence bear on this problem. Many findings based on studies of children in formal school situations as well as in "progressive" schools indicate that schools have either (*a*) failed to discover and apply effective teaching techniques or (*b*) tended to push children too soon into subject matter and ideas relating to adult political, economic, and social affairs.

MEANINGS THAT DON'T CLICK

One group of findings bearing on this problem comes from studies of children's understanding of terms that are involved in discussions of historical and contemporary social, economic, and political affairs. In one study children were presented with a long list of such terms. They were not asked to formulate definitions of their own but were merely asked to mark what they believed to be the correct definition in a group of four alternatives offered for each term. At sixth grade one-third or fewer of the children correctly recognized the meaning of such terms as "government," "tariff," "secretary." One-half or fewer correctly recognized such terms as "self-government," "democracy," "veto." When a large proportion of pupils fail to understand terms such as these, which tend to be common in the writings and discussions of historical and contemporary affairs to which pupils are exposed, it is not likely that they will understand the significance of what they read and hear.

INCREASING THE DOSAGE DOES NOT CHANGE MATTERS

Another line of study concerns children's reactions to war. During wartime, one would expect children to be concerned about affairs in the world since they are reminded of wartime happenings through all channels of communication, including conversation in the home. Findings in various studies indicate that children in the early elementary grades tend to think of war in terms of disconnected and rather concrete happenings. There are, of course, exceptional children, as young as six or seven, who have quite a profound grasp of military and political facts. But it is not until well toward the end of the elementary grades that a large percentage of children are able, for example, to report the names of the major belligerents on both sides.

In a study conducted in January, 1940, with children living in or near a large city on the east coast it was found that 46 per cent of children aged eleven and twelve years gave the wrong answer when asked which country had the larger air force, Germany or England. At the time, the numerical superiority of the German air force was a matter of common knowledge among adults; it frequently was mentioned in the news and in comments on the news, and it was a fact of great concern to all adults who favored the Allied side. Yet this crucial fact apparently had registered on the minds of only a little more than half of the eleven- and twelve-year-old children. Of great importance also for the understanding of the war situation was the fact that the British had a larger naval force than the Germans. One-third of the eleven- and twelve-year-olds gave a wrong answer on this point. A matter of incidental interest in this connection is that predictions of the emotional effects of war on children (short of actual bombing and physical privation) have on several occasions proved wrong, the reason being that adults have assumed that children would see in wartime happenings the same meanings and, in consequence, would have the same apprehensions and forebodings as adults.

It seems reasonable to assume that if children, almost until they reach teen age, show large gaps in their grasp of some of the elementary factors in a social phenomenon thrust upon them so insistently as war, they are likely to have even less concern and understanding with regard to a number of peacetime social issues, such as problems of conservation, capital and labor, and the like.

On the basis of a study made early in the second world war concerning children's understanding of wartime events, one investigator is moved to assert that "it is questionable whether it is reasonable to require children of twelve and under to engage in systematic, detailed study of large-scale social undertakings that do not impinge directly upon their experience."

He states that no exact age can be set at which a child would be "ready" for effective discussion and study of the topic of war (during wartime) or of peaceful social issues. But he notes that children of about the age of thirteen possess more of the requisite knowledge and interest than do children before that age.[1]

CONCEPTS OF TIME

Another line of evidence bearing on the subject of "readiness" for the study of topics usually associated with the social studies curriculum comes from an investigation that deals with the limited topic of children's concepts of time. Various investigators have shown that it is not until near the end of the elementary school period that the average child has much understanding of time in the sense of historical dates and periods, the chronology or sequence of happenings in the near or remote past. A child's conception of "a short time ago" is clearer, as one might expect, than his concept of "a long time ago," but even the former concept may be quite vague to many sixth graders. The idea of the future is, of course, even more difficult to grasp. In one study it was found that while only one per cent of fourth, fifth, and sixth grade pupils named "yesterday" as "a long time ago," 52 per cent named "tomorrow" as "a long time to come." A certain amount of mastery of the idea of historical time obviously is necessary if a child is to grasp the meaning of many of the ideas that are included in the study of world affairs.

A test of children's understanding of time concepts was administered to two large groups of children at the beginning of the sixth grade. Following this, the children in one group had a good deal of emphasis placed on time in their regular class work. They had units on history; they made use of time lines and time charts and various other devices designed to show the relationship between the past and the present. With the other group history in general and time concepts in particular were not singled out for emphasis.

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[1] In a study of children's ability to interpret cartoons dealing with contemporary issues, Shaffer found that the average age at which abstract interpretations (as against, say, an account of the concrete contents) appeared was 12.83. It is perhaps a coincidence, yet it is interesting to note that the age at which this capacity for the understanding of abstract meanings appeared corresponds roughly to the age at which a majority of children showed a fairly comprehensive grasp of the war situation in the study cited above.

The test of time concepts was administered again at the beginning of the seventh grade. It was found that the two groups made almost the same average score. In other words, undefined changes occurring in the process of a year's mental growth, plus experiences which the untrained children had by way of their ordinary reading, radio programs, movies, everyday conversation, and the like, enabled them to perform as well on the test as did youngsters who had received the special instruction.

These findings are in keeping with the dual proposition set forth above, namely, that schools either have not discovered proper methods of achieving some of the understandings they have striven for in parts of the elementary school curriculum, or they have tried to push children too soon into the acquisition of ideas which can be mastered only with added mental maturity and the experiences which come incidentally in the everyday life of the growing child.

PUSHING CHILDREN BEYOND THEIR DEPTH

When children are thrust too soon into subject matter dealing with social and political affairs, they fail, of course, to grasp the ideas that the teacher is seeking to cultivate. But some kind of learning takes place. One consequence is that they learn to bandy certain words with only a partial understanding of their meaning. In one study it was found that a large percentage of children who had learned, for example, that Benjamin Franklin was a minister to France were at a loss to explain what a minister is. Some could make no distinction between a minister in the diplomatic sense and a clergyman.

Another consequence of introducing children to concepts beyond their maturity level is that the instruction may take the form of indoctrination. The less a child understands the more likely it is that what he is taught will be accepted as something which he must believe rather than something to think about.

A further consequence is that ideas which a child gains on a verbal level may be quite divorced from the meanings such ideas should have in terms of the child's own experience. An example of this was observed in one fifth grade class in which the subject of monopoly was under discussion. One boy criticized at length a certain business corporation which had been accused of being a monopoly in one of the readings the class had covered. While inveighing against this monopoly the youngster was exercising a real monopoly of his own. He hogged the class time while other youngsters were eager to get a chance to speak; he spread his elbows over most of a desk which he was supposed to share with two other pupils; he kept his hand on a book which he also was supposed to be sharing with his seatmates.

This gap between big words and little deeds is not limited, of course, to any one maturity level. It often occurs when the individual has a good intellectual grasp of the issue involved. It can be urged, however, that the time spent on an issue in the abstract might better be devoted to experiences that come closer to the everyday lives of children.

UNANSWERED QUESTIONS

Such findings as the foregoing cast doubt upon the effectiveness and the timeliness of much of our teaching. They leave unanswered many questions, some of which are very important. Everyone would grant that the kind of understanding which the school tries to promote through the social studies or their equivalent should involve much more than merely the mastery of subject matter. The object is, of course, to promote ways of thinking and feeling that will help the child to be a responsible member of the group in which he now operates and that will help him to become a responsible member of the larger community into which he will move as he grows older. The scientific findings bearing on how this objective will be met are very meager.

It would be easy to dismiss negative findings, such as those reviewed above, with the charge that they represent "poor teaching."[1] This may be the answer; but on the basis of his own observations the writer ventures the opinion that similar results would be found in a study of the pupils of some of the very teachers who are tempted to make this charge. This is not meant as a retort, but simply as a way of emphasizing a further aspect of the problem. It is difficult at best for an adult to get a child's slant on things. It is easy to assume that a youngster sees matters in the same light and appreciates meanings in the same way as does the teacher. Moreover, it is easy to fall into the error of assuming that the whole class is following along when a discussion is being carried by a few pupils who seem to be interested and happen to be very talkative.

Further interesting findings bearing on this problem emerged from a survey of the achievement in the social studies of over ten thousand sixth grade pupils in 464 schools in Indiana. There were wide fluctuations in the achievement of different school groups, but they were not significantly related to the amount of instruction to which the children were exposed. Pupils in grade 6A who attended schools where there was a nine-month term earned higher scores than children in eight-month schools, but children who attended only eight months earned slightly higher scores than pupils in schools with terms of eight and a half, nine and a half, or ten months. At the 6B level, pupils in schools with an eight-month term made the same average score as pupils in schools with a nine- or a nine-and-a-half-month term.

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[1] Apparently the problem is not solved simply by presenting conventional subject matter in a more lively or colorful manner. In one study it was found, for example, that substantially the same amount was learned when the same facts were presented now in the ordinary textbook style, now in a more dramatic, episodic manner.

In this survey it also was found that children's achievement had little relationship to the amount of time spent on the social studies during the day or week. Pupils in 6A classes that spent from 80 to 99 minutes per day on the social studies earned an average grade score of 6.26, whereas pupils in classes devoting only 25 to 45 minutes per day to the subject earned practically the same score, or 6.25.

GAPS IN CIVIC INFORMATION

Failure to grasp ideas and to master relevant information obviously is not peculiar to the elementary school level. A large proportion of pupils in high school also are lacking in kinds of understanding and information which an educated adult would regard as elementary. In a survey conducted in 1944 it was found, for example, that 51 per cent of high school pupils were unable to name either one of the two senators from their state, and only 20 per cent were able to name both. Only 50 per cent were able to identify Henry L. Stimson as Secretary of War, even though he had figured prominently in the news.

Findings such as these are interesting but not surprising. It seems that when children and young people thus exhibit ignorance concerning contemporary affairs they are simply paralleling their elders. In the survey mentioned above only 45 per cent of factory workers were able to identify the Secretary of War. Only 44 per cent of the adults who belonged to a labor union were able to name the presidents of the Federation of Labor and the Congress of Industrial Organizations. In a sampling of adults at large, 39 per cent were unable to give even a close approximation of the rate of interest which war bonds pay, in spite of intense publicity campaigns.

These items are symptomatic, even though we grant that none of the bits of information is especially important in itself. When high school pupils and adults show such lacks of information, the main reason, quite likely, is lack of interest rather than lack of ability to learn. This explanation becomes all the more significant when we consider that a large proportion of the persons who are unable to name a prominent statesman would probably be able to identify a champion prizefighter, a prominent radio crooner, or a character in any of the widely syndicated comic strips. The same is true of children. In one study of children of near first grade age it was found that only 38 per cent could name the President of the United States, while 74 per cent could identify Andy Gump and 81 per cent knew about Skeezix.

THE NEED FOR A MEANINGFUL APPROACH

The foregoing indicates that when the school endeavors to promote children's knowledge and concern about political, social, and economic affairs, it is in a measure bucking against strong currents within the culture in which the child is reared and bred. The school must, in a sense, whip up excitement about ideas and problems concerning which a large section of the adult population is quite apathetic. Perhaps it is this rather than "poor teaching" that accounts for the finding in one study that pupils who had had many semesters of social studies instruction during their four years of high school were not significantly better informed about contemporary problems and issues than pupils who had had only one or two semesters.

The fact that adults as well as children show such lack of knowledge about matters represented in the social studies adds both to the problem and to the challenge that confront the school. A society uninformed about its own affairs is to that extent weak and vulnerable. The answer is not, of course, that the social studies curriculum should be eliminated. As indicated above, much of what we have tried to teach has been over the heads of the children or unrelated to their interests. But the purposes underlying the teaching remain as important as ever. The problem becomes one of scaling to size the ideas and concepts that go into the social studies curriculum and of harnessing these to projects that have meaning in the everyday lives of children. And this principle applies to other subjects as well. Many pupils move along through the grades with similar gaps in their knowledge of arithmetic, spelling, and other subjects.

AN EXAMPLE OF FUNCTIONAL LEARNING

The underlying purposes are more likely to be achieved if the social studies are not taught as a special subject but are incorporated into or grow out of projects that touch the everyday lives of children. An example of the opportunities for learning in this area appears in a project undertaken by a sixth grade class. The children had noted that it was becoming difficult to buy certain garments because of scarcities during the war. Someone had the idea that many members of the class might have partly worn garments no longer useful to their owners but needed by someone else. From this idea grew what came to be called the Sixth Grade Cooperative Toggery Exchange, and out of this grew a host of opportunities for learning.

Something resembling a corporation was formed in which all the children eagerly bought stock. Arrangements for bookkeeping became necessary, and high school students were invited to help set up the necessary bookkeeping procedures. Many other problems had to be faced. Was it necessary to have a retailer's license? The children sought out the right sources to get an answer. What about insurance? A committee went into this, and found itself going beyond the immediate practical problem as it delved into the origins, uses, and management of insurance. Was it necessary for purchasers to pay a sales tax? Again "research" was needed, leading some children who had been paying out pennies for sales taxes over a long period, and had taken it as a matter of course, to inquire into the nature of taxes and the collection and uses of tax money.

Spurred by problems arising from their own venture, some of the children also made a study of cooperatives. In the process there was added incentive to note the cost and the price of things, to make concrete observations of supply and demand, and so on.

In other words, the children were digging into subject matter which normally would be found in formal courses in economics, civics, and political science, but if taught as a formal subject would probably arouse little interest. Even more important, they had actual experience in planning and acting cooperatively in dealing with a genuine community problem.

With the help of a resourceful teacher pupils can get their teeth into a learning situation that has real vitality. In the day-to-day work of the school there are countless opportunities for linking the academic content of the social studies with something immediate and practical. But these opportunities will vary from group to group and will differ also in different communities.

CHILDREN'S MISCONCEPTIONS

As indicated above, a child's understanding of things will be affected not only by gaps in his knowledge but also by faulty interpretation of what he hears and reads. Each new impression is, of course, interpreted in the light of what is already known. As a result, a child's conception of a thing may have good logic behind it even though it may be wrong. An example is offered by one child who eagerly reported that she had learned where hens lay eggs. "It's on the average." "Where?" asked the surprised teacher. "On the average. Right here in this book it says, 'A hen lays six eggs a week on the average.' "

It is inevitable that children as well as adults will have many misconceptions, for no one can have complete understanding of everything. Even with the best teaching there will be children with alert minds who reach out for approximations to the truth. However, such misconceptions become an obvious handicap if they involve ideas that are crucial to the understanding of a certain topic of discussion or line of study and if the teacher takes for granted that he and the children are working with the same meanings in mind. Questions directed to silent members of the class may reveal that the comments of a few glib pupils who happen to understand give a misleading impression of the ability of the rest of the class to follow along.

ATTITUDES

Attitudes are both intellectual and emotional in nature. A person's attitudes represent what he thinks and how he feels with regard to something. As such, attitudes may involve any emotional current that is part of human experience, including likes, dislikes, fear, hate, anger, affection.

Attitudes are in the process of formation from an early age. During early years they are likely to be influenced more by the child's parents than by his teachers. They may be established on the basis of little or no intellectual understanding of the issue involved. They may be learned second-hand from others or they may become established as a result of first-hand experience, as when feelings aroused, say, through an unpleasant experience with a person with bushy eyebrows are re-aroused when the individual meets another person with bushy eyebrows.

In many areas of prejudice there is little correlation between knowledge and attitude. Similarly, beliefs are often founded more on desire than on logic. As children grow older, moreover, some of them tend to rationalize their attitudes, to back them up with arguments, as though their stand from the beginning had been taken on reasonable grounds. Thus by the age of twelve many children are able to explain a stand as though they had thought it out by themselves even though the bias originated with others. They may go far beyond the original evidence to bolster an attitude that had its inception in a first-hand experience.

While children's attitudes are much influenced by the home and by emotional experiences in their own private lives, there still is much the school can do. Added information and knowledge—especially knowledge shared or gained through association with others—is likely to modify attitudes (except, perhaps, on issues where the child's own emotions are intensely involved). Attitudes of children, as of adults, will also be influenced by discovery of what others think and feel. There is a tendency to join the bandwagon and to follow the crowd. Moreover, in the diversity of topics considered at school there will be many on which the child has not been led to take a stand through his experiences at home or elsewhere.

Accordingly, the attitudes that a child carries with him into adolescent and later years may be profoundly influenced by what is taught and the kinds of experiences the elementary school provides. For this reason the teacher has a responsibility to be on the alert with respect to his own prejudices.

Again, to promote constructive attitudes which might contribute to the child's ability to take responsibility in the social group, it is necessary to provide opportunities for him to acquire and appreciate the practical expression of attitudes making for fair play, sportsmanship, cooperation, and all of the amenities of social intercourse. Moreover, just as conditions which put a child on the defensive or frighten or antagonize him may lead to attitudes of an anti-social and destructive nature, so good attitudes are promoted by everything that enables the child to make good emotional adjustments.

VALUES AND IDEALS

As was implied in the foregoing, the elementary school child acquires a vast number of attitudes—ideas and beliefs that are charged with feeling. To promote the child's development both as an individual and as a member of society it is important for the school program to give attention not only to the intellectual but also to the emotional factors involved in the formation of attitudes. This fact raises questions that go beyond child development and into the realm of social and moral philosophy.

It raises this question: What are the ideas that we wish children not only to comprehend with their intellects but to embrace in their emotions? This raises further questions: What are the characteristics of the citizen and of the society that education is seeking to help preserve or build? What is our conception of the social and moral orientation of our education? What conception of the broader goals and possibilities of education emerges from a study of our heritage from the past, our present resources in the sphere both of ethical ideas and of material possessions, and our future problems and potentialities as best these can be foreseen?

The answer to questions of this sort cannot be obtained merely through scientific study of the development of the individual child. As was acknowledged earlier, a child's development is influenced both by forces within himself and by factors in the physical and cultural environment. For this reason, a study of what research in child development alone has offered thus far does not give the entire answer to the problem of the curriculum. It is necessary to combine the child development approach with a sociological approach in the broadest sense of that term in order to take account not only of the opportunities of the growing child but also of the problems faced by the society in which he lives and the values to which this society is committed.

This point is brought home by questions such as those raised above. It has been recognized in the plan of the enterprise of which this volume is a part. Another volume in this same series, under the senior authorship of Dr. George S. Counts, deals with the social foundations of the curriculum and comes to grips with the same problems. The two volumes approach the problem of the curriculum from different angles and are designed to complement each other.[1]

IMAGINATION

During elementary school years as during preschool, imaginative activities have a prominent part in the child's mental life. During this time certain notable changes are also taking place. By the end of the elementary school period children tend to engage in much less overt play of fancy by way of doll play, housekeeping games, cops and robbers, storekeeping, and the like.

In the meantime, however, the child will have passed through periods during which his fantasies extend into fields that go quite beyond the scope of his make-believe of preschool years. He becomes able to carry on daydreams with complex plots and schemes of a "continued story" character that extend over a stretch of days or weeks. He becomes able to identify himself with or project himself into the action occurring in stories, movies, radio programs, and comic books. If afforded an opportunity, he acquires increasing versatility in giving play to his imagination by way of dramatics, painting, music, and other arts.

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[1] The reader is referred to the Foreword for an account of this companion volume.

While the child is thus able, through his imagination, to enter into a widened range of vicarious experience, other factors come into play that more and more prevent him from abandoning himself to pure fantasy. The accumulation of ideas and information that gives substance to his daydream also serves to direct and constrain his fantasies. By virtue of his growing knowledge he may become more critical, more disposed to build a fancy that is at least plausible and logical within itself. Again, his gain in knowledge may press him into increasingly elaborate fantasy as he tries to build a story that is not too implausible to himself. Thus, in dreams about himself as an aviator at the age of ten he may not be content to gird the globe as though by magic, but may take pains to provide for fuel, weather reports, and landing fields.

The imaginative activities of children of elementary school age offer both an opportunity and a challenge to education. At this level, as at the preschool level, observation of the child's make-believe as revealed through his actions, his writings, drawings, and dramatic compositions can sometimes provide insight into his thoughts and feelings. Imaginary settings can also be used as a means of helping the child to gain insight into himself and of solving personal problems. The preceding chapter on the preschool child touched upon some of these procedures.

MOVIES, RADIO PROGRAMS, AND COMICS

Particularly challenging to the educator are the interests which children show in ready-made forms of make-believe provided by the movies, radio programs, and comics. In some studies it has been found that the average elementary school child spends from one to two hours each day in listening to the radio. Many children listen upward to three or four hours a day. During the late elementary school years the average urban child is likely to attend the movies about three times a month. There are many who go much oftener. The time spent on comics is difficult to calculate. The average elementary school child regularly follows several comics. In the case of a large number of children a major proportion of out-of-school reading is devoted to comics. We may roughly estimate that the average urban elementary school child during the fall, winter, and early months of spring devotes at least a third as much time to these three forms of entertainment as he spends at school.

The vicarious experiences afforded by movies, radio, and comics appeal to practically all children regardless of sex, level of intelligence (except at the lowest extreme), social and emotional adjustment, economic status, and educational opportunity. This means, among other things, that these media of entertainment should not be regarded simply as good or bad in their own right, but as convenient means whereby a child can give play to certain very strong interests. They are the servants rather than the creators of the child's appetite for vicarious experience.

We can recognize this fact and still allow for the fact that while these media do not create the basic appetite, they cultivate particular interests. We can also recognize that they may cater to the child's appetite in ways that are wholesome or in ways that are undesirable.

COMPETING INTERESTS

While these forms of entertainment appeal to all children, many other factors in the child's life will influence the amount of time he spends on them, and the extent to which he is preoccupied with the make-believe world they offer. One noteworthy fact in this connection is that many children show a sharp decline in radio listening with the coming of spring, when the pleasant weather and longer daylight hours invite them outside to play. If the appeal of the outdoors were equally strong in winter, or if other indoor activities had as strong appeal, there undoubtedly would be less radio listening during the entire year.

There is evidence in support of this supposition. The pupils in one school whose program had aroused interests which not only kept the youngsters occupied during school hours but followed them home spent considerably less time on the average at the radio than did pupils in other schools with a more formal and stereotyped program. Incidentally, most of the children from the school with the lively curriculum still listened to the radio. It was a matter of less listening rather than none at all. Moreover, their *favorite* programs were also much the same as the favorites of children in the other schools.

According to the above observation the number of waking hours that children invest in the rather sedentary and passive occupation of listening to the radio, attending movies, and reading comics will depend in part upon the extent to which the school, the home, and the community offer competing interests. The educational problem presented cannot be answered simply by demanding that these types of entertainment be raised in quality or reduced in quantity. Indeed, for a child whose interest is not captured by the work at school and who has little opportunity to acquire constructive interests in his out-of-school life, radio programs, movies, and comics offer perhaps the most innocent and harmless of substitutes.

RELATED EDUCATIONAL PROBLEMS

This still leaves the educator with at least two major questions. First, assuming that children are going to use these media anyhow, what can be done to bring these interests out into the open, and, when it seems wise or feasible, to lead the children through discussion and study to increased understanding and perhaps improved tastes so that they may gain even more enjoyment and profit from these out-of-school interests?

Second, and perhaps more important, how can the educator utilize for purposes within the school some of the elements which give these forms of entertainment their tremendous appeal? How, for example, can the comic strip format, which seems to have an allure for children even if the comic is not funny and even if it contains stuff that the youngsters are unable to understand, be adapted for purposes of teaching? Some school people have explored possibilities but the field is still wide open.

Again, how can the elements of animation, of concrete portrayal of ideas, as exemplified by the movies, be utilized to help children grasp concepts in arithmetic and other areas of thought involving complex and abstract ideas? This is only one of many questions which might be raised with regard to the movies, and it leaves untouched the many possibilities that motion pictures provide for bringing the world into the classroom for the child to see and to hear. Again, what can be learned from the radio about techniques of timing, spacing, and sustaining interest?

PERSEVERANCE AND CONCENTRATION

As a child grows in mental maturity he becomes able, on his own, to stay with a task for longer periods of time. This development of staying power appears in activities of the child's own choosing as well as in connection with chores and duties that have been assigned.

The ability to concentrate and persevere does not operate as a unitary faculty or power. The intensity and duration of concentration vary decidedly from child to child and from task to task. Further, a child will vary in his concentration through various stages of a single undertaking. A new project, such as setting the table, may absorb him while it still has novelty or while he still is in process of learning. Later the task may require a distinct effort. Still later it may become a matter of routine. Concentration is likely to wane or to require a good deal of effort if an undertaking is too difficult, or if it is too easy, or if it consists simply in repeating motions that have lost their challenge and their purpose.

An undertaking will best hold attention if it is challenging or if, while lacking appeal in its own right, it is the means to a desirable end. There is no way, however, at least at the adult level, of investing all undertakings with such an appeal that they hold attention for their own sake. Even the most impatient and scatterbrained adult takes countless exertions and exactions for granted, as he waits for a bus, stands in line to buy stamps at the post office, remains outwardly polite even if he is bored as guest or host, goes to a meeting on time even if the appointed hour is less convenient for him than for some of the others, and so on.

If we followed the details of an elementary school child's behavior during a day we would similarly find countless occasions of this sort, even in the case of a youngster who seems to be especially lacking in ability to concentrate. We would find repeatedly that though he may not concentrate with fervor on the tasks at hand, such a child at least has learned to overcome the impulse to do something else. Again, we would find that he takes innumerable expectations for granted, even though he has to be prodded, such as the expectation that he start for school at a certain time.

This is as it should be. In the business of everyday living there is a vast array of chores and requirements that a child, like an adult, must learn to accept as routine. Much should be a matter of habit instead of something that involves either effort or enthusiasm. There is a good deal of inescapable regimentation in the details of living.

The more a child has learned to take certain routine requirements in his stride, the more energy he will have for taking the initiative, for assuming responsibility, for being creative, and for exercising his individuality in the huge domain of undertakings which still allow for freedom of action. In other words the less time and energy a child uses in exercising his "will power" (or the "will power" of his elders) in doing what has to be done anyhow, such as getting to school by nine o'clock in the morning, the more energy he will have for throwing himself into whatever new experiences or new adventures in learning the school may offer once he gets there.

The routine requirements, restraints, and restrictions of everyday life vary, of course, as a child matures. In one respect, there is less and less regimentation, for there are more and more ways in which he can take the initiative and choose for himself. But in another respect, regimentation increases as a child becomes older; for as his abilities expand, more and more is expected of him in the society in which he lives. Actually, it is not a case of increasing or decreasing regimentation but a change in the character of the privileges allowed and the demands imposed as he moves toward maturity.

The fact that everyday living involves a good deal of regimentation still leaves almost limitless opportunities for the child to take the initiative and to acquire sustaining interests of his own. Such at least is the case if regimentation is regarded not as valuable in itself but simply as one of the practical, necessary facts of life.

HINTS CONCERNING THE DEVELOPMENT OF PERSEVERANCE

Adults, notably parents, frequently are concerned about what appears to be flighty, hit-and-miss behavior in children. They sometimes wonder whether there might not be some form of discipline which would promote a child's ability to stay with a job. In considering this, it is always well to remember the developmental side of the matter. First, the younger the child, the shorter his concentration span is likely to be; and the older he grows, the more it can increase. Second, there is the factor of motivation, including the importance of arranging matters in such a way that the child can experience a measure of success in what he undertakes.

Two further points, among others, should be stressed. One is that perseverance should not be treated as a faculty or generalized power that can be disciplined as such. An adult may compel or persuade a child to stay now with this project, now with that, longer than the youngster would stay of his own accord. But there is no certainty at all that such yielding to adult pressure will lead the child to stick it out for the same length of time when he is left on his own on other tasks. Moreover, he may have acquired in the meantime a distaste for the activities to which he has been forced to give sustained attention.

This does not mean that the adult should avoid opportunities for trying to help the child become more persistent. Nor should persistence be treated as an end or value in itself. Rather it should be encouraged in connection with particular activities that seem most opportune. This should be done with due regard for the child's maturity level, his ability to grasp, at least in part, the purpose to be achieved, and his chance of experiencing some success in the undertaking.

Another consideration is that adults should not expect more of children in the matter of persistence than they expect of themselves. There are times when even the most thoroughly self-disciplined adult allows himself some leeway: he sits down to write four letters but completes only two; the fastidious housewife sometimes breaks off early to go shopping although the housecleaning is not finished; the devoted gardener leaves his hoe in the potato patch to listen to a news broadcast. A child may properly ask for little breaks, such as adults allow themselves.

SOCIAL DEVELOPMENT

Earlier in this account were discussed some general trends in the development of social behavior during the elementary school years. The discussion also touched upon many of the factors that influence the child's social adjustments. Many of the propositions set forth in the account of social development during preschool years also apply to the elementary school child. The following will be limited to a few additional points.

DEALINGS WITH OTHER CHILDREN

It has already been pointed out that as a child advances through the elementary school years he is likely to become increasingly immersed in the society of his peers. Much of his upbringing and discipline in the ways of conformity, sportsmanship, and fair play is provided by other children. The standards, customs, morals, and values of his group have a powerful influence. As he grows in ability to take part in complex social enterprises, and as he wins greater freedom to move about in the community, he is likely to share more and more in interests and activities that are distinct from the life he lives with his elders. Sooner or later he will have understandings and share secrets that his elders do not know about.

This process of moving into the world of his peers is a continuation of the larger process of being weaned from the parental home, which began when the child first was weaned from breast or bottle. It is part of the business of growing up, the business of moving by degrees toward the period when the child that was must strike out for himself in a world of adult peers.

DESIRE FOR PRIVACY

One feature of this process is the desire for a certain amount of privacy, a desire which should be respected by the child's elders. This means that while the child's elders seek to participate in his enterprises and concerns they will not thrust themselves into all of his doings. It means that the child's parents should not keep a finger on everything that happens at school nor should the teachers keep a finger on all that happens at home or in the child's out-of-home activities.

CLEAVAGE OF THE SEXES

During the elementary school years children will, when given the opportunity, usually choose members of their own sex as associates, playmates, and friends. The tendency to favor members of the same sex is apparent in nursery school groups even as early as two years. But the tendency becomes stronger as children move through the kindergarten and elementary school years. During high school years, on the other hand, there is a decrease in this cleavage or "distance" between the two sexes.

The causes of this cleavage are no doubt rather complex. From an early age boys tend to be rougher and more robust than girls in their activities. They also tend to have more freedom in roaming the streets and the fields. It is obvious that many conventions and expectations, communicated to children by adults and by older children, come into play to determine certain differences between the behavior of boys and girls. It is also possible that there is something in the nature of the children themselves that makes for differences between the games and group activities of boys and of girls. Whatever the origin, differences that produce a cleavage, once established, become strengthened as boys and girls come to take for granted that there are some activities more typically boyish or girlish than others, with the result that they draw apart until the strong heterosexual interests that arise in puberty come into play. Even then, of course, while boys and girls seek to fraternize with each other they still retain, and in some ways expand, their notions of what is acceptable masculine or feminine behavior.

While this tendency to fraternize more with members of the same sex appears quite generally in the behavior of children of elementary school age, different groups are likely to vary considerably in the extent to which the boys and girls intermingle or draw apart. They will vary also with respect to their ideas of what is appropriate for boys and for girls to do, whether separately or together. For example, in one school boys in the upper elementary grades would have nothing to do with dancing and other rhythmical activities that were very attractive to the girls. In contrast to this, in another school boys and girls alike were enthusiastic about dancing of all kinds, in mixed groups, from the first grade onward. On the basis of observation of the children in the first school one might conclude that the boys' aversion and the girls' attraction to dancing was a sign of a "natural" sex difference. But the behavior of children in the other school suggests a different conclusion. In any event, whatever may be the natural forces at play, it is apparent that different notions about dancing had been acquired by the boys in the two schools.

Many readers no doubt will be reminded of other examples of ways in which different groups have differing conventions with respect to what is appropriate for boys and for girls. Such differences indicate, of course, that factors in the environment come into play. This does not deny the fact that there may be inherent differences between boys and girls which would make for differing interests along some lines and which would contribute to the social cleavage considered above. It does mean, however, that in planning the educational program, including the arts and crafts and provision for recreation and social activities, our thinking should not be bound entirely by sex differences in interests and aptitudes displayed by children in a given community at a given time. Some of these differences may be more artificial than real.

When artificial distinctions prevail it may mean that children of both sexes are being barred from experiences and opportunities for learning which are valuable for the present as well as for the future.

It is possible, for example, that the awkwardness and self-consciousness that many children display with reference to the opposite sex at adolescence might be lessened if there were more undertakings in which boys and girls associated freely during earlier years.

TEAMWORK TAKES PRACTICE

During the elementary school years, the child gains in his capacity for cooperation and teamwork. In order to realize his potentialities he must have a chance to practice. Cooperation involves the learning of certain techniques and skills, and these can best be learned, of course, in group situations. One of the most pressing needs in elementary education is experimentation with projects which can motivate and provide an opportunity for the acquisition of such skills.

A WORD ABOUT COURTESY

Included among these skills are some of the ordinary forms of courtesy. This does not mean simply the learning of superficial forms of etiquette. Rather, it means learning which will sharpen the child's perception of social situations and will increase his competence and poise in dealing with them.

In this particular, we have another illustration of learnings important not only for the present but for the future. One deficiency frequently revealed by youth of high school and college age is a lack of ability to conduct themselves gracefully in social situations. This ability ranges from the exercise of tact to competence in introducing one person to another, and even to the simple art of saying "thank you."

In the day-to-day activities in the elementary school there are, of course, countless opportunities for the learning of courtesy. The example set by the teacher is an important factor in utilizing these opportunities. In school and perhaps even more in out-of-school situations, adults frequently are tempted to deal with children in a manner that would be considered grossly impolite in dealings with other adults. Examples of such discourtesy appear in such forms as arbitrarily overriding a child's wishes, using undue sarcasm, making pointed remarks about a child to others in the child's presence, holding him up to ridicule and humiliation. Even when it is necessary for an adult to exercise his authority to keep children out of mischief or danger, he is likely to be more successful if he applies the standards of courtesy he would apply in his relations with other adults.

Opportunities for learning the value of the social amenities and for practice in them arise especially in connection with enterprises in which pupils carry responsibility. These would include working on committees of various kinds, serving as host or hostess when there are guests in the classroom, meeting and dealing with people on field trips, and the like.

COMPETITION

In an earlier section it was noted that most children of elementary school age understand the idea of competition and are likely to enter into a good deal of competitive behavior of their own accord. Competitive behavior continues to expand during the elementary school years. Such impulses can be exploited and distorted in unwholesome ways. The situation obviously becomes unwholesome if the child works only with the motive to excel or if the issue is so loaded that some children constantly win while others are constantly on the losing end. This occurs, for example, if the emphasis is put exclusively on grades in academic subjects.

The educator, however, in his zeal for cooperation should not blind himself to the fact of competition. Even in situations where every effort is made in school to remove emphasis on competition, children will find ways of their own in which to compete. Moreover, many of the activities that children most enjoy involve both a high order of cooperation and a high degree of competition. Baseball is an example. One of the most important considerations in obviating unwholesome effects of competition has been mentioned at an earlier point: the more the school program can offer to challenge the manifold abilities of children, the more opportunity there will be for a larger number of children to have the experience of achievement and to gain recognition.

SOCIAL HIERARCHIES

The foregoing recommendation has a bearing also on another phenomenon in social behavior of elementary school children, namely, the tendency of children to recognize within their own groups certain rough hierarchies of prestige. Here, for example, is a boy who is known to be able to run faster than any other boy in the group. Here is another who is known to be the best fighter. Still another may be recognized as the one who is the favorite of the teacher, or who has the most spending money, or who gives the best parties, or who is brightest, etc. On each of these points there are other youngsters who are known to be pretty much at the bottom of the heap, while still others occupy various more or less clearly defined positions in-between.

The narrower the range of situations in which children can gain some degree of prestige or recognition, the greater the likelihood there will be that a number of them will constantly have the experience of being underdogs.

LEADERSHIP AND POPULARITY

Another important aspect of social behavior can be found in the phenomena of leadership, friendship, and popularity. There are many qualities within the child himself that make for leadership or popularity or the opposite, such as resourcefulness in suggesting interesting things to do. But there is much that adults can do to influence the situation in behalf of children who find the going rather hard.

One of the first duties of a teacher who is concerned about the social adjustments and the emotional well-being of his pupils is to keep alert for signs that individual children are being accepted or rejected by others. There are techniques to gain information concerning the social status of individual children, such as noting who is chosen and who is not, and who chooses whom when pupils indicate their choices of seatmates, playmates, and the like.

Once the teacher knows the situation, there are many steps he can take to deal with it. He may find that the child who is being ignored or rejected by his peers is deficient in skills that are important in the social life of the group. He may find that the youngster has special proficiencies that can be used to advantage. He may discover opportunities to give prestige value to something that the children did not originally appreciate themselves.

An example of the latter occurred when a teacher, in dealing with a new pupil of foreign birth, converted the child's foreignness from a liability to an asset by maneuvering the group into giving her an opportunity to make an interesting report of differences between her present school and the school she used to attend. One point, among others, to bear in mind in efforts to help a child win acceptance is that the cooperation of other individual children can be enlisted. It is especially helpful if the adult enlists the cooperation of children who have a strong position in the group.

At an earlier point was emphasized the principle that traits which distinguish one child from another tend to show themselves at quite an early age and also tend to show a high degree of persistence. While the educator should not interpret this to mean that a child's personality is rigidly set once and for all, he should adapt his mode of action to the child's characteristics. He should not, for example, try to convert every retiring child into a gregarious child. He should look for ways of overcoming deficiencies and of building up the child's particular strengths in forms of behavior that children value. But apparent weaknesses or deficiencies in a given aspect of behavior may have a different significance in the lives of different children. Two youngsters, for example, may seem to be withdrawn from the group, to be less sociable than their classmates. One may be absorbed in his own projects and quite content with a limited amount of sociability. The other may be eager to associate with other children but shrinks at the possibility of being hurt or of not holding his own in rough play. The former perhaps neither needs nor would welcome help. The latter perhaps could profit from help aimed to enable him to make more social contacts. But this help quite likely should come not through efforts to make him more rugged and robust on the playground but through efforts to help him to make opportunities to deal with his peers in other situations.

MOTOR DEVELOPMENT

The healthy child of elementary school age is on the go much of the time. He picks up an enormous array of skills—largely without benefit of the school. By the end of the elementary and junior high school period he has acquired the fundamentals of most of the motor skills that he will use in his leisure time throughout the rest of his life.

PROFITS NOW, MORE DIVIDENDS TO COME

The child's learning in the motor sphere is an investment for the present. It is also an important investment for the future. In a study of men in their twenties and beyond, it was found that the things they did with their hands during their spare time was influenced to a large degree by what they had learned to do when they were children. The study revealed that men did not, as a rule, take up entirely new motor skills after they reached mature years. Moreover, most of the skills they had acquired as children and now put to use as adults were learned outside the school. Such learnings, in turn, appeared to be subject to the caprice of opportunity.

THE ROLE OF MOTOR ACTIVITIES

As was emphasized in the account of the preschool child, motor activities and skills are important not only in the everyday personal lives of children but also in their bearing upon the children's social and emotional behavior. In the elementary school period, children continue to make a large proportion of their social contacts by way of motor activities. Further, notably in the case of boys, a child's popularity or acceptability to the group will be strongly influenced by his ability to participate in motor activities.

A child's competence in handling the physical environment also plays an important part in his progressive development of self-help and independence. Many opportunities for work, with attendant opportunities to gain useful experience in earning and using money, come to the elementary school child by way of tasks that involve motor skills. This holds true in activities ranging from washing the car to tending the neighbor's baby.

Competence in motor activities can also serve as an important adjunct to intellectual enterprises, such as nature study and woodcraft, various arts, the mastery (through carpentry, for example) of rather complicated ideas of arithmetic and mathematics, and (through work with mechanical things) of concepts concerning electricity and other physical sciences.

NEEDED RESEARCH

Unfortunately, the motor development of children of elementary school age has been neglected quite as much in research as in education. Available systematic findings are limited largely to certain activities in the conventional physical education program and to inventories that list children's play and leisure time activities but do not indicate the extent or excellence of skills involved in these activities.

What is needed is research that will indicate quite systematically the range of motor skills possessed by children at various age levels, the skills that a large proportion of children possess in common, and the skills that show wide individual differences; the way in which such skills function in the lives of children; factors in the environment that promote or hinder the acquisition of skills, and so on. Research of this kind would of course show some differences to exist between children in different sections of the country and between rural and urban groups. It would be well to incorporate research in this area with experimentation by the school.

THE MOTOR ROAD TO A MORE ROUNDED EDUCATION

When we emphasize the importance of motor education we are not advocating that such education be added to the school program as simply another frill. Rather, we are advocating something which goes to the very heart of the curriculum. We look upon increased attention to the motor aspects of a child's make-up as one of several essentials of an educational program geared to the child's development and taking into account the "whole" child.

In this connection it is important to note that the correlation between children's intellectual and motor abilities, while positive, is quite low. The child who lags behind in the academic subjects may well be the child who comes into his own when the group is occupied with motor enterprises. This is another way of saying that a school program which gives dignity and weight to motor education is much better able to provide opportunity for successful achievement and enjoyable recognition to a large proportion of pupils.

Such a situation would offer quite a contrast to the conventional school situation in which a few intellectually gifted youngsters get most of the acclaim and many intellectually "slow" children constantly find themselves in an inferior position, whether such children are segregated in special classes or are indulgently promoted along with their peers.

EMOTIONAL DEVELOPMENT

Much that was said in the chapters on the infant and the preschool child concerning trends in emotional development applies to the child of elementary school age. In the present chapter it is further noted that the scope of a child's emotional susceptibilities increases with the increase from year to year in the scope of his interests and the variety of his concerns. It is also noted that with increasing age the child learns more and more to control the expression of his emotions.

Conditions that give rise to emotions are co-extensive with life itself. The child's emotions will be aroused if he is bored through lack of challenge or if he is defeated or thwarted by a challenge that exceeds his powers. Emotions may also be aroused if the interests and aspirations he has acquired are threatened or blocked. Emotion may be aroused through the furthering or thwarting of the impulse to action that arises in connection with the development of a child's powers. Again, emotion may be aroused in connection with the furthering or blocking of efforts to gain recognition and acceptance in dealings with adults and in dealings with other children.

In passing, the fact may be stressed that the emotional concerns of children of elementary school years are as important as are the concerns of older or younger children. This point can easily be overlooked when adults compare the child at beginning preschool years or the child of adolescence with the youngster of in-between years. Outwardly, at least, the child of school age may appear to be more serene and untroubled than the preschooler who is passing through a phase of resistance or who frequently gives vent to his anger. He likewise may appear on the surface to be more placid than the adolescent who faces the challenge that comes with puberty.

Moreover, many adults feel that the emotional behavior of the child of elementary school age does not put the same demands upon his elders as does his behavior as a baby or as an adolescent. The baby's crying must be attended to. When he shows his temper, something usually has to be done or at least he will make sure that the adult takes notice. At adolescence, again, the youngster's striving for independence may demand attention and the impulses that come with puberty frequently arouse parental concern and apprehension. On the other hand, the flare-ups and impulses of the elementary school years tend to be less disturbing to adults.

This does not mean, however, that life is less thrilling or that the bitter emotions are less poignant during these intermediate years. The child is throwing himself into the life of this period. The issues involved are as important from the child's point of view as are the issues that occur at any other time of life.

EXPRESSION OF EMOTION IN DEVIOUS WAYS

In the account of the preschool child were described some of the indirect and devious ways in which a child may express his emotions. As he advances through the elementary school years this tendency toward indirectness and deviousness will, if anything, increase. In expressions of anger, for example, the child may be aggressive about a matter that really is not the basic issue. When he seems to "hate" a project at school the actual situation may be that he feels hostile toward the teacher, or resents the fact that another child excels him, or that a pupil with whom he likes to associate prefers to work with someone else when this project is under way.

The child may put up a hostile front to conceal fear of failure. He may cover apprehensions or lack of confidence by giggling, evasion, frequent shifting from one activity to another, and the like. His efforts to be with the teacher, or the industry he shows in the classroom while the other children are at play, may spring from fear of rough-and-tumble games on the playground.

A description of the ways in which children express their emotions or go to great lengths to disguise or conceal their feelings would make a volume in itself. For the present purpose we can only emphasize the point that such indirection and concealment take place and that the job of trying to understand the feelings underlying a child's behavior requires that we keep an eye not only on the more obvious displays of feeling but also on the more subtle symptoms.

EMOTIONAL EXPRESSIONS AT HOME AND AT SCHOOL

It is well to bear in mind, also, that the child's emotional life as displayed at school may differ in many respects from his emotional manifestations at home. The process of establishing more subdued expression of emotions and of concealing real feelings under a front or façade is likely to appear more conspicuously in the child's behavior in the classroom and in his dealings with adults and children outside the classroom than in his behavior in the home. Many children who feel free to cry, to whine, to explode with anger in the home would be very much ashamed to show similar behavior when they are in school or out in company. One incidental consequence of this fact is that parents and teachers may have quite different impressions of the same child and may differ considerably in their interpretation of his behavior.

EMOTIONAL CONCERNS OF CHILDREN'S PARENTS AND TEACHERS

Not only is there likely to be a difference in the ways in which a child expresses his emotions at school and at home, but there also will be certain important differences in the emotional forces at work in the two places. Certain issues arise in each situation that are not prominent in the other. For one thing, the parent has many concerns not fully shared by the teacher even if the home-school relationship is a very cordial one. Parents are more likely than teachers to be anxious about the physical safety of children. This is partly due to the fact that the school environment usually is a protected one (made so deliberately, oftentimes, to avoid legal liability), while the home and out-of-school environment is usually less circumscribed. So it is the parent rather than the teacher, for example, who carries most of the burden of worry whether the child might drown when he goes swimming or might have an accident when he goes coasting or bicycling. Moreover, even when the teacher is definitely fond of each of his pupils, he usually still has less of his own emotional life at stake in his relations with any one child than is true in the relations between parent and child.

The fact that there are these differences between the home and the school makes for greater difficulty in understanding and interpreting the child's emotional behavior. It also frequently makes for lack of understanding and lack of sympathy in the relations between parents and teachers. It sometimes is difficult for the parent whose heart follows a single pupil to school to appreciate the situation of the teacher who must be concerned not about this child alone but about twenty or thirty or forty others. It sometimes is difficult for the teacher to appreciate that the parent's attitudes and practices with respect to the child's behavior are imbedded in deep emotional concerns that have been in process of formation from the time when the child was conceived, or even before.

The School's Responsibility for Children's Emotional Well-Being

As has been implied above, an educational program geared to children's development must, of course, be concerned about their emotional welfare. This implies not simply a tender effort to understand and help the individual child, but also a larger concern about the impact of the curriculum and all aspects of the intellectual and social life of the school upon individual pupils. It means that the school will be as much concerned about the happiness of pupils as about their intellectual achievements. To take a specific example, it means that the teacher will rejoice rather than criticize if a child who has been socially backward seems to find himself and for a time is so absorbed in the interests shared with other children that he shows a slump in his reading or arithmetic.

It is true, of course, that the child's life at school represents only a small fraction of his daily existence. The out-of-school forces that bear upon the child's emotional well-being are likely, in the case of many children, to be much stronger than the forces for good or ill that are at work within the school. For this reason, there are limits to what even the best school program can do.

Granting this, a large responsibility still rests upon the school. This is all the more true by reason of the fact that the school is the focus of many of the forces that are extremely important to the child. Much of the child's social life centers around the school and his contacts with schoolmates during recess and other periods. Much that goes into the making of his experiences of success and failure and into the development of interests that strengthen him in the face of adversity is under the auspices of the school. Moreover, it is the school perhaps more than any other institution that officially and publicly stamps a child as one who has achieved satisfactorily or has failed to make the mark.

REPORTS TO PARENTS

The foregoing has a bearing on one of the many problems involved in securing good communication between the school and the home, whether orally or by written reports. The problem of communication mounts, of course, as soon as the school goes beyond a report card that shows whether a child is excellent, good, or fair in arithmetic, spelling, etc., and tries to give an appraisal of other matters, such as work habits, emotional adjustment, ability to get along with others, and the like. The teacher will, perforce, judge the child's assets and liabilities from the point of view of the school situation and in terms of the school's goals as well as from the point of view of the teacher's own private notions. To make a sound judgment in these terms is difficult, but let us say that a good appraisal has been made.

So far, so good, but only a part of the job is done. Now there is the problem of communicating this appraisal to the parents. The parents, on their side, see the child from the point of view of the home and their intimate knowledge of his behavior there. Moreover, they appraise him in terms of their aspirations for his development and in terms of their private notions and motives.

The aspirations of the parents and the goals of the school may be quite similar, in which case all concerned should be able to understand each other well. But the goals may be different. A dominating mother who wishes her child to be more pliant may wonder, and perhaps object, when the teacher approvingly notes that the child has ". . . gained in self-reliance during the past term." An ambitious father, with an eye on his son's success in academic subjects, will have difficulty in understanding why a teacher should happily report that the youngster has made ". . . splendid progress, is much less of a grind, and enters much more into friendly give-and-take with other children." Parents who feel that a certain child has been pushed around too much by an older sibling may regard the report that this child ". . . wants to have his own way" as something rather favorable, while the teacher views it as a liability.

The more the school makes a policy of giving parents a report of each pupil's personal and social characteristics, the more important it becomes for the teacher, as far as is practicable, to see the child through the eyes of the parents as well as through the eyes of the school. It is valuable also for parents to have first-hand glimpses of the way in which their child functions and behaves at school. To accomplish this interchange takes time and effort, to say the least, even if the teacher and parents are very understanding and cooperative persons. There arises the simple and practical question of how the teacher can find the time and energy to attend to this matter along with the countless other things he has to do.

The answer is not that we should expect the teacher to add now this, now that, to a schedule that already is full. Rather, the more responsibility a teacher is asked to carry in connection with the emotional well-being of his pupils, the more time and energy we should release for that purpose. How can this be done? It cannot be done properly simply by trying to subtract this or that previous duty from the teacher's load. Instead, the schedule as a whole should be examined with a view to finding room for important things that must be done. This might include, for example, an examination of the length of the school day and the school year and the allocation of this time. Perhaps within the prevailing school year there should be a week or two or more when no classes are in session but the teacher is on duty and is using the time so released for home visits, or for conferences with other teachers who are acquainted with the pupils in his class, or for compiling records or doing the many routine chores that are involved in making a study of individual pupils. Perhaps the school day could be shortened with the understanding that the time released should go to this purpose.

Such recommendations go counter, of course, to the deeply ingrained notion that a teacher is on duty (and should receive compensation) only when he is surrounded by a class full of pupils. This means that plans for allocating time to matters that the school regards as important cannot be decreed by the school people alone but must be shared with the community.

Still on the practical side, provision for achieving the purposes here under discussion should properly take account of the allocation of the school's financial budget. Within a budget of a given amount perhaps a larger appropriation should be made, for example, for secretarial and clerical help in preparing reports.

TROUBLE IN THE MAKING

When education sets out to assume some responsibility for the emotional well-being of children, it faces a terrific challenge. It is a challenge that confronts not education alone but all institutions and agencies under the control of adults in our society. This is brought out as soon as we survey the casualties along the course of human development. If present trends continue, a large proportion of pupils in the average first grade class will be in the ranks of the maladjusted at one time or another during their life span.

One writer has estimated that a teacher of an average class of forty children may expect that in later life seventeen to twenty-six of her pupils will suffer from conditions ranging from unhappiness and a sense of futility to criminal behavior or insanity. Included with this is the estimate that out of one hundred typical school children one or two will commit major crimes and spend part of their lives in jail. Eight to ten will develop serious mental illnesses and will spend part of their lives in mental hospitals or under private care. Three or four will be so retarded that without special training they will have great difficulty in becoming self-supporting or useful citizens. This author also estimates that thirty to fifty will be maladjusted individuals with maladjustments taking such forms as petty crime, vocational failure, chronic unemployment, emotional instability, marital unhappiness or divorce, and other forms of failure to make a satisfactory go of things.

These estimates are arresting, to say the least. We may take issue with the prediction that thirty to fifty of one hundred will become maladjusted individuals. Short of the commission of crime or actual evidence of insanity or neurotic behavior, the criterion of what is "maladjustment" must be an arbitrary one. Moreover, at the adult level as at the childhood level it would be well to distinguish between "developmental" problems—problems which rise and wane in the course of growth or in the process of adapting to the changing opportunities and demands of life—and problems which denote an essential weakness and dislocation in the make-up of the individual. But even if we discount the estimates, the evidence from many studies still indicates that a large percentage of individuals fail in the struggle to meet some or all of the major demands of life.

A SAMPLE CASUALTY LIST

The above estimates have dealt with outcomes throughout the life span, but the casualty list begins to fill rapidly even in early childhood years. A large proportion of children fail, literally as well as figuratively, to make the grade in the first year of school. As we have mentioned earlier, a large proportion of children who are having trouble or who are making trouble in the sixth grade began such careers in the first grade or before.

The various forms of dislocation which may occur in the lives of children of elementary school age are shown in a survey by Rogers of mental health problems in three large elementary schools in a midwestern city. Various criteria of maladjustment were applied, including categories such as "chronological misfit," "intellectual misfit," "academic misfit," "reading disability," "school failure," "truant."

Another set of criteria dealt more intimately with the personal adjustments of pupils. Information concerning pupil adjustments was obtained through teachers' ratings, through the testimony of pupils concerning one another, through a standard personality inventory, and through ratings by observers who visited the classroom. Seventeen per cent of the pupils were judged to be maladjusted according to criteria that were applied in evaluating results from two paper and pencil personality tests. A child was judged to be maladjusted according to the judgment of his schoolmates if one-seventh or more of the members of his class wrote in his name in one or more of the deprecatory items of a "Guess Who" test. On this basis 19 per cent of the pupils were deemed to be maladjusted. Sixteen per cent of the pupils were judged to be maladjusted when rated by trained observers who visited the classroom and observed the individual pupils.

There undoubtedly would be differences of opinion on whether the criteria used in this study represent too high a standard of perfection or whether anything below the standard set actually represents maladjustment. Be this as it may, the cumulative result from all the approaches described above made it possible to devise a more comprehensive standard which took account not simply of the child's standing when judged by one but by several of the criteria. A child was regarded as "seriously maladjusted" and as showing clear evidence of poor mental health if he proved to be maladjusted according to four or more of the instruments or procedures used (this held for grades four, five, and six; a somewhat different but comparable standard was applied to the lower grades). Twelve per cent of the 1,524 pupils in the study were seriously maladjusted when judged on this basis. Moreover, 30 per cent of the pupils fell short of meeting this criterion but still showed evidence of being poorly adjusted, though not necessarily to a serious degree.

This estimate of the prevalence of maladjustment or dislocation in the lives of elementary school children is not out of line with other estimates made on the basis of the judgments of teachers, mental hygienists, and others.

It is not implied that the school is solely or primarily responsible for this state of affairs. Certainly there are factors in the emotional and social adjustments of children that are quite independent of school. However, the school still has responsibility at least along two lines. First, the effects of grouping, promotion and nonpromotion, academic standards too exacting for some and lacking in challenge for others, reading and other academic disabilities obviously are matters that occur primarily under the auspices of the school.

We do not pretend that there is a perfect practical solution to the problems involved. But simply from the point of view of the effects enumerated, the schools of our country face a serious problem. Included is the question of whether some of the outcomes by way of academic achievement which have been so highly prized in the past are worth the price. This does not imply that we deny the importance of academic achievement. A child may find tough going in mastering the three R's, but he also is going to be out of step if he does not master them. This fact would still, however, permit a wide latitude in scaling academic requirements to children's capacities.

Second, even though many of the causes of maladjustment and unhappiness lie outside the school, it still is the function of education to try, as far as possible, to alleviate the emotional distress and to overcome or counterbalance other disturbing influences in a child's life. We can propose no magic formula by which this can be achieved. Our recommendations would include a reiteration of all the proposals that have been made in this volume. They would emphasize the point that education should be concerned with early childhood years and with factors in the home and in the community at large that affect the child's well-being. A thorough program for dealing with human distress arising in conditions outside the range of the influence of the teacher or the school requires either that the school's functions be expanded or that the school cooperate with other agencies in a more strategic position to solve the problem.

Expanding Loyalties

An eventual feature of the child's development is the establishment of attachments and loyalties reaching beyond the parent and the home just as the child acquires interests and occupations in the world outside the home as he grows older. The experience of affection which a child has in the home should be a spur rather than a deterrent to the development of loyalties as he moves outside the home. To facilitate this, parents must, as time passes, modify the expressions of affection which they give, and also modify their expectations with regard to expressions of affection they receive, as the child moves from affectionate relations with his parents toward affectionate relations with someone else.

While this process of emotional weaning is going on, the parent will continue to have a tremendous emotional stake in his child. This is a fact for others to remember in all dealings where parents are concerned. If parents seem blind to faults that others detect in a child, it may be because their love for the child is partly blind. If they seem overconcerned about the child, it is because their own emotional lives are deeply involved in his welfare. Even when we think that a parent is misguided, we must try to appreciate the parent's side.

This matter of affection has ramifications beyond the parent-child relationships. In early childhood any adult who has responsibility for a child's care occupies, to a degree, the position of a substitute parent. To the extent that this is true the child desires to be accepted emotionally by these other adults just as he counts on the affection of his parents. In many ways his reaction to the substitute parent parallels his reaction to the real parent. When he is young he is receptive to endearments. When he becomes older he undergoes a change in this respect, but even though there may be a change in expression he is likely to continue, as he grows older, to want to be liked by his elders.

Sex

While sex is not a matter of pre-eminent concern during the elementary school period, it looms as a matter of considerable importance in the lives of many children. Children acquire curiosity and many interests relating to sex. Many children will receive impressions and acquire attitudes before they have anything approaching sex education in the home. A recent study has shown that a rather large percentage of children of elementary school age have had sex experiences of one kind or another, ranging from masturbation to experimentation with the opposite sex.

We may assume that the elementary school child's interest in sex is not likely to be as urgent or as preoccupying as it will be after puberty has been reached. During this stage, while children are interested but while most of them are not intensely preoccupied, it should be possible to offer much by way of nature study and elementary biology which will help to satisfy their curiosity and also help prepare them for the kind of instruction they may receive when sex interests later become more acute and more a matter of personal concern.

In one study parents in 981 homes, representing almost two thousand children aged two to thirteen years, were interviewed concerning children's questions relating to sex. The parents reported that almost two thirds of the children had raised one or more questions. The questions most frequently asked related to the origin of babies (e.g., "Where do babies come from?" "Where do we get babies?" "Where did the kittens [puppies, bunnies, calves, etc.] come from?"). Questions in this category constituted about 41 per cent of all questions reported. Other questions dealt with the coming of another baby (14.5 per cent); organs and functions of the body (including, e.g., questions about the navel, breasts, genital organs) 11.9 per cent; physical differences between the sexes, 12.7 per cent; the process of birth, 10.4 per cent. Smaller categories included questions dealing with the relation of the father to reproduction (5.2 per cent); intra-uterine growth (2.4 per cent); and marriage (2 per cent).

Sex education at this level as at other levels does not consist, of course, simply of handing out certain items of information. The attitude of the teacher and the atmosphere which prevails in the group are very important. Some teachers undoubtedly are better qualified to handle the subject than others. Moreover, even at the elementary level many children do not view sex simply from the detached point of view of someone seeking scientific information.

Here is another area in which there is clear need for research. We do not need further research to establish the fact that a large proportion of children, notably the older children in the elementary school range, have interests of one sort or another in the subject of sex. However, we need more study to probe the variety of motives associated with these interests. There also is great need for a study of ways in which sex education can best be handled at the elementary level. This, incidentally, should include attention not only to what goes on within the school but also to ways in which the school and the home may collaborate or supplement each other.

OTHER EDUCATIONAL ISSUES AND IMPLICATIONS

Grouping

Whenever we deal with two or more children we face the fact of individual differences. This is true no matter what may be the basis of the grouping. If children are grouped according to mental ability, they will vary in chronological age, physical size, social maturity, and motor ability. If they are grouped according to chronological age, they will differ with respect to other variables. No grouping is likely to be pure, even with respect to the particular variable on which it is based. If all children in a group had precisely the same I.Q., each child would still differ from the others in the nature of his mental abilities and in the way his mind worked.

Many considerations enter into the problem of grouping.

There is the consideration of efficiency. It would be impossible, and unwise if it were possible, to have a separate educational program or a special teacher for each child. Moreover, unless there were grouping of one sort or another there would be chaos.

SOCIAL AND EMOTIONAL CONSEQUENCES

Another consideration, obviously, is the impact of grouping upon the child. This consideration becomes increasingly important as the child advances in years during the elementary school period. As was pointed out earlier, the child's life with his peers becomes a matter of crucial concern during the elementary school years. A basis of grouping that radically cuts across this concern may operate as a blow to the child's prestige, seriously affect his confidence in himself, and bar him from associations that count heavily in his own system of values.

SOME PRACTICAL CONSIDERATIONS

There is no perfect answer to the problem of grouping, but there are some general guides and some practical arrangements that will solve the problem at least in part. First, it would seem sensible that grouping of children in school should be made in terms of the goal or goals of the school. If the goal is simply to promote mastery of academic subject matter, children should be grouped roughly according to their ability in these subjects.

If the school has other goals or a goal more comprehensive than mastery of subject matter, additional criteria for grouping must be put into effect. If the primary emphasis is academic achievement as such, there seems to be little ground for a half-hearted and makeshift attempt to recognize other concerns that the children may have by piling a miscellany of bright and dull pupils into one class. To do so is no kindness to the less able, and it imposes a penalty on the able. The latter fact can be observed in classrooms where a few bright children while away their time with supreme boredom as the teacher wrestles with the duller pupils. In such a situation it would be a kindness if someone would instruct the bright pupils in the fine points of the art of playing hookey.

If the goals of the school are more comprehensive, then there should, as far as possible, be varied groupings in keeping with such goals. This practical solution has been implied repeatedly in the emphasis on the many-sided aspects of a child's make-up and the need for a school program which ministers not merely to the child's intellectual development but to his motor, social, and emotional development. Such arrangements would call for a flexible system of grouping not only within the school but also within a given class.

As soon as the school program gives more attention to motor education, for example, youngsters within a given class or youngsters representing several classes might spontaneously group themselves by reason of common interests and skills in ways very different from an arbitrary grouping within a class and also in ways different from groupings children make on their own accord when working, say, on a project in social studies. In such groupings of their own, it is unlikely that children would establish purely homogeneous clusters based upon ability alone, for children are attracted to one another by factors other than similarity of ability alone. But there still would be greater opportunities for the children to get acquainted with each other in different situations, and there also would be greater opportunity, under the guidance of the teacher, for youngsters who are behind in some enterprises to have a chance to show their mettle in other projects in which they happen to be more competent.

Even when it seems necessary, for practical reasons, to continue the antique custom of pinning twenty, thirty, or forty children to the same classroom each hour of the day and each day of the week, world without end, there still are many possibilities of flexible grouping within the classroom itself. This has been demonstrated repeatedly in schools that have adopted the "activity program" or other "newer" practices, whatever may be the name. In such situations children may be organized into committees or by other means to deal with various projects, all of which are related to the main work of the class. Moreover, it has been observed that once children have the opportunity to learn how to function in such arrangements they show more ability to take responsibility for their good deportment and industry than is assumed in the class situation where a teacher continually rides herd upon the pupils working as an entire class upon a single job.

NEEDED RESEARCH

The discussion above raises many questions concerning practical arrangements and the reactions of children. Here is one area where research that combines educational experimentation with the study of behavior of children as individuals and as groups is very much needed. Few research undertakings would be more timely or crucial in the whole field of education. Such research, incidentally, should also take account of individual differences among teachers. Within even the most excellent staff there will be a teacher who has a greater talent for one thing and one who has a greater talent for another. One of the purposes of the school should be to make available to a large number of pupils the benefits which may come from the special talents or abilities of individual teachers.

Such research should also take account of the benefits the children may gain from children who differ from them, as well as the benefits they may gain from children who resemble them. Some purposes require a very heterogeneous group. Other purposes can be achieved best by a relatively homogeneous group. It is only by associating with children quite different from himself that a child can learn the lesson, so important in life, that one must be able to get along in a world peopled by persons who are dull or bright, fat or thin, stupid or wise, robust or weak, sickly or healthy, etc.

Art

The subject of art deserves more space than can be given to it here. In the section on the preschool child were raised a number of considerations that are relevant also to the elementary school level.

AN AREA OF WASTE AND NEGLECT

The subject of art has not received the attention or emphasis it deserves either in research or in education. Moreover, as was previously suggested, the waters have been muddied by enthusiasts for this theory or that. As a result, tremendous resources which might be used to add value and enjoyment to life have gone untapped.

What seems to happen in the case of large numbers of children is that artistic potentialities remain blocked or uncultivated. Nearly all children have the capacity to learn to sing and enjoy singing, for example, but only a small proportion utilize singing as one of the important pleasures of life.

A part of the answer to the question of how artistic resources might be preserved and exploited in the interest of human happiness must be found in the study of children of preschool age as well as the study of children beyond that age. Again and again we may see children of preschool age who give full voice to song, who plunge into rhythmical activities, who draw and paint with zest, and then, at the age of six or seven or later, appear hesitant, uncertain, unable to let themselves go. Many who made an enthusiastic start become self-conscious, self-critical, and inhibited. Some self-criticism is inevitable. As children grow older they become more able to appraise their own performance in all things, including art. But it seems likely that the process by which artistic activities entered into wholeheartedly at the age of three or four become converted into chores to be performed, or lessons to be learned, or fall into complete disuse with the passing years, is determined in large part by the kind of training received in early childhood and by the negative example of adults who have failed to realize their own artistic potentialities.

A few further points may be added. A study conducted several years ago indicates that many of the standards proposed in the music education of children were quite unrealistic in the light of what actually was achieved. The study does not indicate whether the standards were too high, or whether the teaching was inadequate, or whether the time and attention allocated to singing was too meager. A thorough study would undoubtedly show that children possess large untapped resources and potential ability not only in singing and in instrumental music but in all of the arts. One incidental item in connection with singing is the fact that many songs are pitched in a key so high that even during elementary years many children lack either the ability or the training to sing along with the group. The same phenomenon can be observed, of course, even more prominently in adult years when a large proportion of adults are driven to silence or to a makeshift type of harmonizing when there is community singing.

In the foregoing we have maintained that children possess potentialities in the field of music and the other arts that go largely untapped. We may add, in passing, that art is a matter of much importance not simply in the minds of artists or a few educators but in the minds of a large proportion of the population. In a recent study in which several hundred parents were interviewed concerning satisfactions and problems involved in the rearing of children, it was found that children's artistic activities provided a very prominent source of parental satisfaction. As will be noted in a later section, a large proportion of adolescents were found in one study to attach much importance to art. The writer does not know of a comparable study at the elementary level; but one has only to observe children to note that artistic activities under good auspices can become absorbing and thrilling.

ART AS A LONG-TERM INVESTMENT

The development of artistic appreciation and skill at the elementary school level is a matter of importance not only from the point of view of the function of art in the contemporary lives of children but also from the point of view of preparation for the future. If current trends continue, it is likely that the present generation of children will, as adults, have more leisure than did adults of earlier generations. One means—and of course only one of many means—of filling leisure time and of preventing increased leisure from adding to the boredom and sense of futility of life is the use of art activities. And this does not mean primarily the "arty" forms of art.

Although the writer knows of no study in the field of art comparable to a study cited above in the sphere of motor activities, it is very likely that it would be found that the artistic activities of adults are determined to a large degree by the skills and forms of appreciation they acquired during the elementary and early high school years, just as it was found in the study of motor activities that the constructive things adults do with their hands are influenced by the skills and interests acquired during childhood years.

RESPONSE OF ELEMENTARY SCHOOL CHILDREN TO "NEWER" PRACTICES

During the last decade or two a great many schools have departed from conventional procedures centered largely upon academic subject matter, and have experimented with newer, more "progressive" methods. The innovations have variously been aimed to replace formal procedures with liberal and democratic techniques; to take account of children's interests and concerns; to provide opportunity for initiative and enterprise; to promote problem-solving as distinguished from rote learning; to provide a more functional, integrated approach, usually accompanied by a wider range of activities and projects than is afforded by programs that emphasize academic subjects as such.

In many of these enterprises the missionary spirit has been stronger than the urge for scientific evaluation. As a result, much that has been done has been in the nature of innovation rather than true experimentation.

There have been passionate orations and fervent writings for and against. Opinion has been opposed to opinion, feeling to feeling. Straw men have been raised and battered down. Through all of this, the cause of education would have profited greatly if the evangelists for the new and the protagonists of the old had combined a greater appetite for scientific study with their passion for debate.

For reasons noted above, the authentic evidence emerging from educational innovations has been rather meager in proportion to the labor and zeal devoted to the cause of the "newer" education. But a number of findings have emerged. These findings do not add up to a single answer. Not all studies agree. Some testimonials have doubtful value by reason of the fact that the newer procedures may have been tried with children of high average intelligence or socio-economic status who do not provide a representative sampling of the child population.

SOME GENERALIZATIONS REGARDING "NEWER" PRACTICES

The following more or less conclusive generalizations concerning the response of elementary school pupils to "newer" practices rest in part upon quantitative research data and in part upon inferences from limited quantitative findings or observations.

Gains in Mastery of Subject Matter. When matched approximately with respect to intelligence and socio-economic background, it is not likely that pupils in schools where newer practices prevail will surpass other pupils in achievement in the regular academic subjects such as reading, spelling, and arithmetic. The outcome is contingent upon many factors. Among these are the factors of time and energy devoted to regular academic subjects as compared with other enterprises. Where newer methods prevail the school program is likely to incorporate a larger range of activities and projects than does the conventional program. While these projects may lend interest and zest to reading, arithmetic, spelling, and other subjects, they also are likely to divert some of the energies which pupils might otherwise devote to these subjects. On the other hand, pupils in the experimental program stand to gain from opportunities for learning in enterprises which go beyond the usual methods of teaching the three R's.

Other Gains. Some of these gains have been measured; others have not. One extensive study indicated that pupils in the experimental program show, for example, a higher frequency of activities under such headings as leadership, initiative, and experimentation.

Gains that children might show under certain headings cannot so readily be measured by available objective tests. Where opportunity is afforded, pupils in the newer program are likely to have more experience—and one may reasonably expect that they will acquire more competence—in activities such as oral composition (by way of class reports, discussions, forums, debates, etc.); in various forms of art, including painting, graphic arts, puppetry, dramatics, etc.; in the techniques involved in the work of committees; in parliamentary techniques; in collaboration between several pupils on projects or reports; in evaluation of the work of the class and in the pooling and weighing of suggestions and recommendations which are offered when group plans and policies are under discussion.

To the extent that the experimental program lends encouragement, pupils who operate under this program also stand to gain improved skill in connection with various hobbies and extracurricular interests.

A Weighing of Values. These are some of the many largely unmeasured benefits that may accrue to pupils under the "newer" program. Let us now assume, for the sake of argument, that children in the more conventional program do somewhat better in the regular academic subjects as measured by standard achievement tests. We now face several questions.

First, assuming that it is important for children sooner or later to master arithmetic, for example, to what extent is the superiority of the conventionally taught child likely to be temporary in nature? Given added maturity and experience, will the child who has come through the newer program eventually catch up? The evidence on this point is not complete or conclusive, but such indications as we have point to an affirmative answer.

If the answer is affirmative, then the educational bank account of the child in the newer program stands about as follows: he has gotten his quota of arithmetic (as an example of subject matter skill), and along with that he has had an opportunity to profit from the larger variety of opportunities for learning that the program affords.

Second, if we waive the assumption that the youngster, when more mature, can rather speedily overcome his deficit in arithmetic (as compared with pupils who earlier have given more time and have struggled more assiduously with this subject), will the benefits accruing to this pupil from the "richer" program offset or more than offset the advantage which the control child has in solving the problems presented by a workbook in arithmetic?

Obviously the answer to this question will depend upon the hopes and goals imbedded in our educational program. If we put higher value on extra competence in arithmetic as used in the conventional classroom, our answer will be that the conventional program has done the child a greater service. If, on the other hand, without deprecating the importance of arithmetic we attach value to all learnings and achievements which bring out the various potentialities of a child, our answer will be that the education which ministers best to all-round development of the child has done the better service.

Before stating any final conclusion, we should add certain other generalizations.

Responsibility and Self-Direction in the Classroom. From various lines of observation and limited objective data it may be concluded that children of elementary school age have a greater capacity for assuming responsibility for their conduct than has been implied in the conventional methods of running a classroom. Under wise democratic auspices children can learn to buckle down to work, to make intelligent use of their time and energy without having a teacher standing over them constantly as a taskmaster. Of course, there have been classroom situations where teachers with more fervor than good sense find themselves with children who are quite out of hand, unable to get down to serious business. But as against this, there is the observation that children in what might appear to be very unpromising schools and neighborhoods have risen to the occasion in fine fashion and have shown poise and self-direction which go beyond anything that a person brought up in the old-fashioned educational situation would have predicted.

To the extent that the newer education offers pupils a greater opportunity to take a hand in the management of their educational affairs—and to the extent that children rise to this opportunity—the newer education has scored a home run. Certainly a child who has gained in intelligent self-direction has gained something to be highly prized.

Out-of-School Behavior. There is another angle to this matter of responsible self-direction. To what extent and in what ways may the opportunity within the classroom for children to take responsibility, to exercise initiative, and to have a voice in the management of their affairs have an effect on their conduct out of school?

On this point there have been many claims and counterclaims. There also is at least one quite systematic study that deals with this point. This is a study by R. L. Thorndike which compared the behavior exhibited by children from "activity" and control schools when these children left the classroom to go on field trips and excursions of various kinds. Comparisons were made on the basis of such criteria as rigidity of adult control while en route or at the destination (on the street, in the subway, and at the museum, for example); social acceptability of the conduct of the children from the point of view of the convenience of the public at large; and the responsiveness of the children to what the trip offered (such as exhibits and talks at the museum).

Although the differences between the two groups were not uniformly statistically reliable, the comparisons favored the children from classes where the newer practices had been used. The author of the study is quite cautious in formulating his conclusions. He mentions reservations with respect to sampling, low observer reliability, and possible bias on the part of the observers. Then he goes on to state that subject to these limitations, the observations suggest that the activity program (the name given in this school system to the "newer" program) has produced certain gains in ability to maintain self-discipline in these out-of-class situations, and that possibly other gains in degree of interest and participation and in social responsibility also accrue. And he adds: "Certainly these data give no support to a claim that the activity program leads to disorder and lack of self-control."

Observations such as the foregoing are in keeping with observations made in out-of-school situations where the response of children to rigid authoritarian techniques has been compared with the response of children to more "democratic" adult procedures. From several such studies comes testimony which adds up, bit by bit, to the generalization that democratic procedures are not simply more humane, that they do not merely produce more friendly and enjoyable relationships between adult and child, but that they actually represent a more efficient way of dealing with children.

Recapitulation. We can recapitulate the foregoing, in somewhat cocky fashion, as follows: Many of the innovations made at the elementary school level are in keeping with the child development approach to the curriculum, and findings with regard to the impact of such innovations on children tend to be favorable when considered from the point of view of the child's welfare as a whole.

Our endorsement of the "newer" education would be more wholehearted if it were not for certain reservations and a number of unanswered questions such as those listed below.

RESERVATIONS AND AREAS OF NEEDED RESEARCH REGARDING "NEWER" PRACTICES

Our reservations are both specific and general in nature.

The Problem of Establishing Actual Democratic Procedures. There is the reservation that classroom policies which purport to be liberal and democratic are sometimes quite undemocratic in actual fact. First, it has been shown in a rather extensive study conducted in both private and public schools that when a teacher adopts a democratic policy it often happens that the class tends to be dominated by a small handful of loquacious, aggressive children. In the median class, the most talkative child made as many contributions as were made by the 16 least talkative children combined. Almost 40 per cent of all contributions were made by the three most talkative children in the various classes. The children who thus monopolized a large proportion of the discussion were not at all uniformly the children who were best qualified to speak, when qualifications were measured in terms of their knowledge in various fields.

Second, by virtue of this tendency for a few children to take over, the decisions and choices seemingly freely made by the group as a whole may actually be determined to a large degree by the suggestions and demands of a few children who happen to be glib of tongue and who are good at getting the jump on others in presenting their views. The solution should be found, not in a resumption of autocratic teacher control, but in joint efforts by teacher and pupils to find ways of managing things in a more equitable manner.

The Problem Presented by Children's Interests. Another reservation has to do with the general matter of children's interests. Some proponents of the newer education seem to have gone too far in treating interests as something Heaven-sent and sacred rather than as behavior tendencies that are the product, in large measure, of learning. A child's expression of interest may represent anything ranging from a momentary caprice to a profound and strong disposition to lean toward one line of action in preference to certain others. Again, as already implied, what seems to represent the interests of the group may be something determined primarily by a few rather aggressive pupils who assert their wishes and have their way. The bias of the teacher very readily also comes into the picture, of course.

Several sections in this and preceding chapters have touched upon considerations that are important in the appraisal and cultivation of interests. We have noted, among other matters, that the younger the child, the closer is the correlation between what he can do and what he seems to want to do. As he grows older, and as his abilities and potentialities expand, the factor of chance comes more and more into play. Possible choices increase in number and the particular choice that is made depends more and more on the opportunities presented.

The choices come to depend increasingly upon the facilities provided, the example set by others, both children and adults, the way in which a certain enterprise may be scaled to render it difficult and unattractive or accessible by easy and successful stages. This does not mean, of course, that interests, as we find them, are entirely fortuitous. Among other matters, interests show definite developmental trends in keeping with the child's growing capacities and his readiness to venture into different undertakings. Further, if given the opportunity, children with different aptitudes are likely to acquire individual interests in addition to those they have in common.

An educational program that aims to be in line with children's interests should keep in view certain basic principles. It is essential to take note of the capacities and potentialities possessed by children at the maturity level being dealt with. It is further essential to appraise the goals or objectives that are preeminent in the child's own development at this particular stage. As far as it is possible to find an answer to this question, provision should be made, again as far as it is possible, to supply the child with a range of opportunity which will enable him to make choices of his own on the basis of his own experience. Through all of this it is important to remember that interests are acquired even though the basic capacities and motives underlying the enterprise in which the child happens to be interested are a product of growth as well as learning.

THE PROBLEM OF A BALANCED ACADEMIC DIET

Another reservation, from the child development point of view, with regard to newer practices in elementary education touches upon the matter of emphasis in the educational program. In many schools labeled as progressive the program seems to have been loaded much more heavily on the intellectual side than would be indicated by the demands or potentialities of the child's own development. Sometimes it has seemed that an effort was being made not only to cram the cerebrum of the pupil with the verbal learnings of the conventional program but to go far beyond this by plunging fledgling children into ideas and concepts difficult for even mature adults to grasp.

CHAPTER VI

ADOLESCENCE

The term "adolescence" is commonly used to denote the period of transition from childhood to adulthood. It represents no precise range of years. The milestones that mark the beginning of adolescence come much earlier in some children than in others, and, at the other end, some children and young people continue to grow physically and mentally for a longer period than others.

For the present purpose the adolescent period is arbitrarily defined as beginning with the first phases of the onset of puberty and continuing until the young person has ceased to grow in height and has reached or nearly reached his maximum "vertical" growth in mental ability. Thus defined, the period would roughly extend from about the age of ten, when a small proportion of girls have reached the menarche (first menstruation), until about the age of twenty. In terms of school level, this would include many of the older girls and some of the older boys at the elementary school level, a larger proportion of girls and a smaller percentage of boys at the junior high school level, nearly all young people in the junior and senior high school grades, and many during their first year or two at college.

In the present chapter are discussed certain major developments during the adolescent period. Comments with regard to educational implications are confined largely to the high school level.

DEVELOPMENTAL OBJECTIVES

During the adolescent period it is possible to single out certain major and pre-eminent lines of development. All of these are features of a constellation of changes which convert the individual from his status as a child to that of a young adult. Biologically the change means that he becomes capable of procreation. Socially it means, or should mean, that he shifts from the status of being a child in the family to the position of one charged with the responsibilities of a potential parent. Legally it means that the child moves from the position of being a minor toward the position (contingent on varying statutes) of being fully responsible for his acts and for any contracts that he may enter into. Psychologically it means that the child should be moving toward economic, intellectual, and emotional self-support. Developments along each of these lines have clear educational implications.

AREAS OF DISLOCATION

Under conditions of modern urban life a large proportion of young people in late adolescence go through a period when the world is out of gear with their own potentialities. A large number of these young people have the urge to be on their own. In an earlier generation there would have been more opportunities for them to strike off for themselves. Under present conditions they cannot easily do this. Instead, they face a period of economic unemployment.

Many of these young people are preparing for occupations requiring college or post-high-school training and must pass through several years of economic dependence upon others.

During periods of general unemployment others who are not heading for occupations requiring lengthy schooling also find it hard to get a job. The rules of seniority and other vested rights of older persons make it difficult for the young individual to compete on equal terms.

Even in periods of full employment many adolescents seem to feel that they are somewhat superfluous—not needed in the affairs of the world. An indication of this appears in a study of adolescent boys after our entry into World War II. Large numbers of boys reported that they had not been called upon to contribute to the war effort as much as they thought they could.

As against this, there is the fact that many young people in high school and college find ways of earning part or all of their own keep. Even during rather hard times enterprising young persons find a surprising number of things to do. Others, again, do not choose to seek remunerative work, or are urged by parents not to do so, on the ground that it is better for them to invest their time in preparing for future work than to divert some of their energies into work of a part-time, stop-gap sort. Still others, perhaps, hold themselves above the kinds of jobs that are available.

Points such as these should be remembered before we throw all of the problems of economic unemployment of the young into the lap of education and other social agencies. A part of the responsibility properly rests upon the individual and his family. But we must also recognize the fact that we have not found the modern equivalent of the provision of an earlier day, when a larger proportion of adolescents lived on farms where there was plenty of work for all to do, or lived under conditions that made it easier for young people to take part in the arts and crafts that flourished in or near the home.

The problem here is, of course, not solely or perhaps even primarily a responsibility of the educator. It reaches into the entire structure of society. It involves not simply finding the modern equivalent of the old cow pasture and the berry patch, but, perhaps to an even greater extent, changing attitudes and expectations with regard to the role of the young person in a technological age.

Another form of dislocation arises in connection with sexual development. In the case of a large percentage of the young people who eventually will marry there is a lag of several years between sexual maturity and opportunity for socially sanctioned sex activity. We may refer to this lag as a period of sexual unemployment.

We do not imply, of course, that young people should forthwith marry as soon as they have attained sex maturity in a biological sense. Time is needed for the individual to adjust to this development and to establish his heterosexual interests. It would be difficult to determine how long or how short this lag between attainment of sexual maturity and legitimate mating should be. Moreover, this problem, again, is not solely or perhaps even primarily an educational problem. It does, however, involve educational issues. Among other matters, it raises problems with respect to educational responsibilities and procedures in the broad field of sex education.

It also raises questions with respect to the timing of the educational program as young people reach adulthood. For those who continue their general education beyond high school it is the custom to go to college four years in order to earn a college diploma. This means that a large proportion of such persons continue their formal schooling until the age of about twenty-two before they make a break, either to join the general population or to go on for specialized professional training. It has been pointed out that this custom is questionable in the light of the facts of adolescent development. Much could be said for arranging the program so that the formal break would come more nearly at about the age of twenty.

PHYSICAL AND PHYSIOLOGICAL DEVELOPMENT

The outstanding feature of physical development during adolescence is, of course, the attainment of sexual maturity. This is accompanied by manifold anatomical and physiological changes.

SEXUAL MATURITY

The menarche, or onset of menstruation, is commonly regarded as marking the girl as being sexually mature or capable of conception. Actually, according to some studies, there may be a lag of many months between first menstruation and the ability to produce egg cells that can be fertilized. Be this as it may, the menarche obviously represents a distinct milestone in sexual development.

The ability to produce spermatozoa may be regarded as a sign of sexual maturity in the boy. This development is not accompanied by any single event as readily identified as the beginning of menstruation in girls. Various criteria have been used in studies of the onset of puberty in boys, such as the appearance of pubic hair that has the texture and characteristic twist or kink of that of the adult, or the appearance of axillary (armpit) hair, or a combination of these and other physical signs. These criteria presumably are correlated in time with the development of ability to produce effective spermatozoa.

The age at which sexual maturity is attained, as indicated by the menarche in girls and the above-named criteria in boys, varies decidedly in the case of individual boys and girls, and also as between boys and girls. The averages for boys and girls vary also when different groups are studied. For this reason, averages can be regarded only as approximate. In the case of various groups of American girls, averages have been found to range from age twelve and a half to about thirteen and a half years. In a study of several thousand boys (utilizing the pubic hair criterion) the average age was about fourteen and a half years.

Averages such as these tell only a small part of the story. More instructive, in many ways, are the findings with regard to the proportion of children at various age levels who have reached puberty. Here we find that the range in age is from about ten to eighteen years in girls, and from about twelve to eighteen in boys. In one study, it was found that 3.4 per cent of the girls had reached the menarche at age 11, 16.1 per cent at age 12, and, respectively, 47.9, 78.8, 91.5, 98.3, and 100 per cent at ages 13, 14, 15, 16, and 17. In the study of boys referred to above, 2 per cent had reached puberty at age 12.25, 18 per cent at age 13.25, and, respectively, 46, 70, 93, 98, and 100 per cent at ages 14.25, 15.25, 16.25, 17.25, and 17.75.

SEX DIFFERENCES

The averages cited above indicate that girls attain puberty about a year and a half ahead of boys. This difference can readily be confirmed by everyday observation. The difference appears not only in physical signs but in the way the boys and girls behave. In a seventh or eighth grade class it is likely that there will be many girls who are interested in boys, while few, if any, of the boys are interested in girls (or at least they pretend not to be). Differences in maturity of heterosexual interests likewise appear in connection with parties, dancing classes, dramatic activities, and the like. Sometimes the boys will resort to various devices to avoid the girls. The girls, in their turn, may look for opportunities to be in the company of boys who are a grade or two, or more, ahead of them in school.

This sex difference during early adolescent years raises certain practical problems with regard to the grouping of pupils at school. The problem is complicated by the fact that individual differences between boys and between girls are even more pronounced than is the difference between the averages of the two sexes. However, if the school's academic and recreational program is not set too rigidly according to age or grade groupings, the pupils themselves do much to solve this problem.

ANATOMICAL CHANGES

The large individual and sex differences that appear in connection with the age of onset of puberty appear also in connection with a number of physical developments associated with puberty. Among these physical developments is a spurt in physical growth—most noticeably in increase in height—that commonly begins some months prior to the onset of menstruation in girls and the comparable stage in boys, the enlargement of breasts and of the pelvic area in girls, the enlargement of the external genitalia in both sexes, the growth of the beard and the change of voice in boys, and so on.

Certain interesting additional physical phenomena are associated with the earlier average maturing of girls. During infancy and the ensuing years, and again at maturity, boys are taller and heavier, on the average, than girls. But near the beginning of the teens a group of girls may for a time equal or even slightly exceed in height and weight the average of a group of boys.

A difference appears also in skeletal development. In the process of development parts of the skeleton that at first are "soft" or cartilaginous become harder, more brittle, and "bony." This process is known as ossification. Techniques involving the use of X-ray pictures have been devised for determining the extent of ossification at various age levels. From such examinations it is possible to determine a child's approximate "skeletal age." "Skeletal age" is analogous to "mental age" in that a child may have a skeleton corresponding to that of the average older or younger child, just as his mental age may be higher or lower than the norm for children of his chronological age.

In studies of skeletal development it has been found that girls, on the average, are "older" than boys. One investigator has noted that the difference is about one year at about the time children enter elementary school, and about two years soon after the end of the elementary school period. In other words, girls are, for a time, "older" than boys both biologically and anatomically. Perhaps we should add that boys catch up in due time. Further, it may be noted, without showing its relevance to the present purpose, that boys not only catch up but also retain the sexual powers acquired during adolescence through a longer span of years. A large proportion of men continue to have the power to beget children at an age when most women have completed the menopause.

SOME PSYCHOLOGICAL EFFECTS OF PHYSICAL CHANGE

Developments in the physical and physiological spheres require many adjustments. The youngster must adjust to changes within himself. He must adjust to new differences that arise between himself and other children by reason of variation in rate and pattern of maturing. He must adjust also to certain changes in adult attitudes and demands with respect to his person.

Changes in the physical properties and dimensions of the body are likely for a time to draw the child's attention to his body. The phenomena associated directly with sexual functions have many repercussions. More about these later. Changes in bodily stature and in bodily proportions, in leg length, foot size, size of breasts, and breadth of hips, and so on, similarly have many direct and indirect effects on behavior. It takes practice, to say the least, to get used to these changes.

For a time the child may be awkward. Where earlier the act of walking, for example, was rather automatic, the child now may be conscious of his gait and posture. Adjustments such as these may be complicated by uncertainties springing from the fact that the youngster cannot predict where it all will end. It is impossible to foretell when the buttocks will stop growing bigger, when the breasts will cease to enlarge, when the gain in height will come to an end. A further complication may arise if the child is afflicted, as many are, with pimples, especially if he feels embarrassed about them by reason of mistaken notions as to their origin.

The child's reaction to changes within himself is likely to be affected by differences he observes between himself and others. By reason of variation in time of onset of puberty a boy may shoot ahead of his peers in height and take on manly characteristics, while another youngster, previously much like him, is still childlike in size and appearance. The latter, in his turn, may be perplexed or disturbed by the fact that others are maturing earlier than he. Within a group of girl companions there may be a corresponding phenomenon. Early or late in the adolescent period there may be shifts in relative height, weight, and physical attractiveness. As a result of physical and psychological factors that come to the fore during adolescence, a youngster may find that qualities which he has earlier possessed or newly acquired render him more attractive or less attractive to his peers or to the opposite sex than was previously the case.

Associated with the development of sexual maturity, there likewise may be changes or new elements in the attitudes, standards, and expectations that the child's elders bring to bear. A strapping, manly-looking fourteen-year-old boy who happens to have matured earlier than his peers may discover that adults—especially those who have not known the boyish fellow of a year or two ago—now treat him as though he were a young adult. Men talk to him in man-to-man fashion and women treat him guardedly or with animation as though he might be a prospective bridegroom, or son-in-law, or an innocent-looking wolf.

In countless other ways, varying from child to child, the adolescent may discover that adults, including his parents, view his person and behavior in a new light and have attitudes toward him that range all the way from respect, as though he were an equal, to suspicion or forebodings concerning his character or his future.

ALL IS NOT WOE

The young person's psychological reactions to the physical developments of adolescence are not, of course, all on the unpleasant side. To be sure, the youngster is facing the necessity of making many adjustments, some of them both distressing and disturbing. The adolescent period of growth has its own peculiar hurdles and hazards, just as do all the other stages of development from the cradle to the grave.

But while recognizing this, we should not overdo our compassion. In some accounts of physical development in adolescence it has been the fashion to paint a highly lugubrious picture. If the child is fat he is miserable; if he is skinny he is sad. If he is tall for his years, he staggers under the responsibilities that fall upon him; if he is short, life is a bitter pill. The woe that goes with a big bosom is equaled only by the misery that comes with a flat chest. And so on.

Actually, of course, adolescent growth has both its dark and its bright aspects. The changes that mark the transition to adult status not only present problems but also bring occasion for joy and pride.

VARIATION IN RESPONSE

The psychological impacts of pubertal changes not only will vary from person to person but may vary also from group to group. This was noted in one study which investigated the so-called "negative phase" of adolescence. Some earlier investigators have set forth the view that there is a period, usually lasting a few months preceding the onset of puberty, when children tend to show a reversal of their usual behavior: instead of responding as before, they now are passive or they respond in just the opposite manner. Along with this "negative phase," according to some observers, there are likely to be other signs of disturbance, such as restlessness, physical and mental uneasiness that may express itself through indolence, irritability, withdrawal, instability, and the like.

In the study now under review information concerning this matter was obtained (with respect to girls only) from adults who were in close contact with children of an age when such symptoms might be manifest. It was concluded from the study that girls in general show a tendency to be restless and to exhibit some forms of instability with the coming of puberty. But more notable was the finding that the extent to which such behavior occurs seems to be related to the circumstances in which the girls live. Girls from lower socio-economic levels, coming from poor homes, in congested neighborhoods where many undesirable conditions prevailed manifested such symptoms to a marked degree as compared with a group of girls from homes on a higher social and economic level. Perhaps the girls from better homes would similarly be found to show more poise than the girls from poorer homes if the study had been made some years prior to or some years subsequent to the period of puberty; so the difference cannot be regarded as a phenomenon of puberty alone. However, the study does indicate, in keeping with earlier statements in this chapter, that the impact of new developments (at adolescence or any other time of life) will be influenced by all that has gone into the life history of the individual.

EDUCATIONAL IMPLICATIONS

The rather obvious educational implications of developments such as those described above is that the school program should give attention to the physical growth process through units that offer information on the subject and opportunity to discuss it from the point of view of the personal concerns of children.

While it is easy to make this recommendation, it is not so easy to prescribe just how the job should be done. A good answer would require research on the developmental side and experimentation on the educational side. From the developmental angle there is need for research dealing with the concerns of children in this area. It is a simple matter to point to a number of psychological repercussions of physical growth. But available findings do not adequately show the range, frequency, and intensity of the various concerns that children may have, or the manner in which these change or shift as children move from the prepubescent through the pubescent and into the postpubescent phases of adolescent growth.

MOTOR DEVELOPMENT

Some time during adolescence children reach their maximum or near maximum powers in the use of their musculature, in the strength, speed, and precision of their movements, and in their capacity to use old motor skills or to acquire new ones. This section will discuss some of the broad issues which are presented by motor development during this period.

SEX DIFFERENCES

During elementary school years boys are superior to girls in a number of motor performances which involve the use of the larger muscles, such as running, jumping, distance throw with a ball, and the like. These differences become even more pronounced in adolescence. Girls tend to reach their maximum strength and speed of gross bodily movement at a somewhat earlier age than boys. In strength of grip, for example, annual gains by girls taper off, while boys continue to advance. In an activity such as the fifty-yard dash, girls not only reach their maximum but may even show a loss in speed at about the age of sixteen years, while boys are still improving in speed. On the other hand, because of individual differences within each sex group there are, of course, individual girls who will outrun many individual boys.

The superiority of the boys in most of the more robust physical activities is due to a variety of factors, physical as well as cultural. From an early age boys tend to have more opportunity and practice in such activities as running, jumping, dodging, tussling. They tend to have more freedom and opportunity for such activities as bicycling, swimming, and coasting, and for a variety of mechanical skills, such as carpentry, operation of toy trains, and the like.

By reason of these differences, it is not possible to determine precisely how much of the superiority of the average boy is due to factors within his own constitution as distinguished from factors in the environment. Certainly, as we have said, the environment favors more robust activity by boys, but it is likely also that something in the make-up of boys helps to create this environmental difference.

At the adolescent level differences in the proficiency of boys and of girls in certain operations are definitely augmented by differences in physical powers and proportions. The fact that boys become relatively bigger, heavier, and stronger of muscle gives them an advantage in activities calling for strength alone or for strength combined with speed. Moreover, differences in bodily proportions—notably the wider pelvis of the girls and the difference in the angle of the attachment of the thigh to the pelvis—also give girls an anatomical disadvantage in some locomotor activities.

MECHANICAL SKILLS

Differences between boys and girls are quite conspicuous in a number of mechanical skills. In connection with these, the effects of opportunities for practice are quite apparent. For example, in a test presenting the individual with several pieces of wood which, when assembled, make a wheelbarrow, it is likely that boys will get the idea more quickly and, having gotten the idea, will put the pieces together more rapidly than will the girls. On the other hand, if presented with pieces of cloth which, when assembled, make a doll's dress, it is likely that the girls will be quicker in getting the idea and in fitting the pieces properly together.

COMPARISON OF SEXES IN PRECISION AND STRENGTH

While boys tend to surpass girls in feats of strength or feats calling for speed under full load, the differences between boys and girls are likely to be smaller in feats requiring aim and precision without requiring strength. For example, the average boy will throw a baseball farther than will the average girl. But in accuracy of throw at a near target the difference between boys and girls is likely to be much smaller.

IMPLICATIONS

The differences and similarities noted above have implications from both a social and a vocational point of view. On the social side, it follows that joint participation by boys and girls in the more robust athletic activities after the age of about fifteen will not function primarily in the nature of a competitive contest between or among equals. Such participation, instead, will mainly serve the social purpose of enabling the members of the two sexes to be together.

More important, perhaps, but largely unexplored so far as systematic research is concerned, are the vocational implications. A large number of occupations require motor skills. Any sex differences in motor abilities that might be crucial from an occupational point of view should, of course, be taken into account in an educational program aiming to help young people plan for or prepare for jobs. Such differences might bar one sex or the other from various lines of choice.

As it happens, the findings with regard to motor ability as such do not add up to any definite large-scale policy of discrimination between boys and girls. (We are not now considering social conventions, factors that come into play when the girl marries and becomes a homemaker, and so on.) As indicated above, the average boy will definitely have an advantage in occupations that tax a person's gross physical strength. There are many such occupations, but the increasing use of machinery tends to put a diminishing premium on brute strength.

As further indicated above, girls tend to be less at a disadvantage in operations calling for precision as against strength, and the superiority of boys in mechanical operations tends to be lessened or to be reversed in operations in which girls have had more nearly equal or superior opportunities for practice. To the extent that this is true, there is a corresponding constriction of the range of occupations open to one sex and not to the other by reason of differences in actual or potential motor proficiency.

This does not mean that we forthwith should strive in vocational education to direct women into most of the occupations conventionally reserved for men, or vice versa. Many considerations other than simply the factor of motor capacity enter into decisions on this issue. We are merely pointing out that research findings with regard to motor development, limited and inconclusive as they may be in many respects, suggest that there can be much more latitude of vocational choice, notably for girls, than conventionally has been allowed.

Two further points on this: First, if the trend toward increasing out-of-home employment of women is to continue, we might as well give girls a break by widening the range of occupations they may choose. Second, and more to the immediate point, an attitude toward work more liberally in keeping with children's actual potentialities would open many opportunities for both boys and girls. To take a few simple examples: A home-owner hires a boy to mow the lawn or to help put up the screens in the spring. A housekeeper hires a girl to help with the dishes or to "sit" with the baby. Actually, opportunities such as these should be open equally to both sexes. Certainly most able-bodied girls could soon learn to run a lawnmower and certainly any ordinary boy could learn to become a competent washer and "sitter."

Multiply these examples a hundred- or a thousand-fold. Think of the blessings that would flow to boys and girls who seek a chance to earn some cash and to the men and women who need helpers in the daily round of their duties!

ENTER THE OLD ROCKING CHAIR

During middle and later adolescent years there is a falling off in the volume of bodily activity so characteristic of preschool and elementary school years. Children who earlier were on the go much of the time now do more sitting or standing around. There is a decline in participation in vigorous sports and a relative increase in the time spent as a spectator of sports.

There is a decrease in the number of different play activities. This decline in number of different or separate activities begins even during elementary years. It occurs, in part, by reason of lessened activity and, in larger measure in its early stages, by reason of occupation with more highly organized games which combine many operations into one large activity (a well-organized baseball game, for example, combines running, dodging, chasing, throwing, and the like).

A part of the decline in the number of separate play activities engaged in no doubt also takes place by reason of the fact that the older child's time is taken up with plans and projects that are more complex and time-consuming in nature. But much of the decline seems to come from a disinclination toward activities that earlier had an appeal. A survey of a large junior and senior high school population showed a fourfold increase from the seventh to the twelfth grade in the number of occasions when girls asked to be excused from gymnasium classes because of an alleged physical disability. The teachers were quite generally agreed that most of the girls seeking to be excused were not physically handicapped at all. Instead, the underlying considerations appeared to be physical disinclination (as distinguished from actual handicap or disability) combined with social motives. It appeared that as social interests became stronger, interest in physical activity as such declined. In addition, other competing interests, more social than purely physical in nature, came into play, including a concern lest hair-do and make-up be disturbed, fear of developing large muscles, and unwillingness to make the necessary changes in dress.

This trend toward a sedentary mode of life continues into adult years. Many adults in occupations that require little manual labor go for days on end with no physical exercise other than the minimum involved in doing their daily chores or in walking to the nearest means of transportation.

EDUCATIONAL IMPLICATIONS

These sedentary tendencies raise certain educational issues. A sharp curtailment of physical activity often occurs while the individual is still capable of vigorous physical activity (even though he may not have the stamina of an earlier day). In other words, the shift from much to little activity is not entirely a form of physical self-protection.

Further, apart from the question of how much or how little exercise the body may need for good health, there is the point that physical activities—in the form of athletic games, hiking, gardening, hunting, fishing, boating, and the like, or in the form of a large variety of hobbies and avocations that put the muscles to use—can provide a great deal of pleasure, relaxation, and release from boredom.

Next, it may be noted that most school programs are rather barren from the point of view of cultivating physical skills and interests which can continue to flourish when the individual is no longer in school. Where the emphasis on highly competitive sports is heavy, the school program may put obstacles in the way even in connection with the limited range of activities which the school affords. A large proportion of young people can enjoy baseball or football, for example, but only a few can make the "varsity" team. Moreover, even those who can make the team find it difficult in out-of-school life to get the facilities and the large personnel required for a game such as baseball.

In earlier sections it was noted that the manual and other skills used and enjoyed as a matter of free choice during adult years are influenced by what the adult learned to do as a child. In one study we noted also that only a small percentage of men had acquired these motor skills through the aid of the school.

When these points are added together they present a profound educational problem. We face, among other matters, the question of the extent to which the high school, as distinguished from or in collaboration with other community agencies, should take responsibility in this field. Whatever may be the answer, from the child development point of view one of the many matters that should receive prominent attention in any scheme for a redesign of secondary education is a study of ways of revising the concepts and the practices underlying the conventional physical education program.

MENTAL DEVELOPMENT

Developments in the intellectual sphere during adolescence are many-sided. There is a continuation of mental growth—in the sense of a "vertical" increase in power—but the rate of growth tapers off during the late teens. In the meantime, the young person continues to gain in a "horizontal" direction—in the sense of increased information, knowledge, ability to draw upon past experience, increased ability to make decisions, to form judgments, to exercise common sense, and so forth. Sooner or later during the adolescent period, he is likely to give some thought to the meaning of life and to his place in the scheme of things. Many adolescents sooner or later also try to take stock of some of their ideas concerning themselves, concerning morals and religion, values and ideals. Another goal of intellectual development during adolescence is the attainment of a certain amount of intellectual self-help—the ability to think things through to practical decisions with an important bearing upon one's way of life, to examine some of the consequences of such decisions, and to do one's own intellectual housekeeping, so to speak.

MENTAL GROWTH

During the process of maturing the mind grows in the sense that there is an increase in mental "horsepower," in ability to learn, in capacity to deal effectively with increasingly difficult and complex intellectual tasks. Mental growth is rapid during infancy years; it continues at a good clip during preschool and elementary years; it continues also at a good pace into adolescence. But then the gains diminish. Eventually the individual reaches his approximate maximum of mental power, analogous to the reaching of his maximum physical height.

One popular assumption has been that mental growth as defined above comes to its end some time between thirteen and sixteen years. Actually, in the average case, mental growth in the sense of an increase in capacity analogous to an increase in stature or an increase in muscular strength continues well into, if not throughout, the teens. In one study in which repeated tests were made of the same group of young people from the age of eight to the age of seventeen, it was found that gains were still continuing up to the seventeenth year, although at a considerably slower rate from fifteen to sixteen than during earlier years, and at a much further diminished rate during the sixteenth year. A small selection of these young people who were singled out for further study continued to show gains into the nineteenth year. It is estimated that the "terminus of mental growth . . . for the group taken as a whole, is not earlier than nineteen."

On the basis of available studies, utilizing different tests and different groups, we cannot set a precise age at which mental growth ceases for the average young person. We can say, however, that the process is likely to continue well into, and beyond, the conventional high school years (with the probable exception of children with rather low intelligence).

The continuation of the growth of intelligence into or through the high school years has educational implications which have not been fully explored. One practical implication is that a child who lacks the brain power as a high school freshman to master a certain subject (such as algebra) or to get the meaning of certain ideas and concepts (in the area of history, for example) may, with added growth and experience, gain the requisite power. When he reaches the age of the usual high school junior or senior he may be able to master material conventionally assigned to the freshman grade.

To the extent that such a state of affairs holds true, there would be implications for the placement of subject matter and the grouping of pupils. Moreover, the possibility that the duller person may be able, in his own good time, to master materials usually allocated to an earlier age would have certain implications with respect to vocational counseling and training.

BRAIN POWER PREFERRED

High mental ability is regarded as a pearl of great price by practically all adolescents, whether they happen themselves to be bright or dull, or high or low in scholarship. The premium that they place on mental ability appears in their appraisal of others (as shown in a later section, "good brains" is regarded by both boys and girls as one of the most desirable qualities in a person of the opposite sex) as well as in their estimates of themselves. One aspect of this regard appears in the fact that while children cannot help but recognize differences in mental ability, they tend to be reluctant to admit mental shortcomings in themselves.

This is illustrated in a study in which pupils and teachers were asked to give their opinions with respect to the relative importance of various causes of failure in high school subjects. Nine such causes or reasons were listed, and each was to be marked on a scale of importance. In the opinion of the teachers, the most important single reason for failure was "lack of brains." In the combined results obtained from the pupils, on the other hand, lack of brains was named as the least important, save one, of all the reasons on the list.

Regardless of whether the teachers or the pupils came nearer to the truth of the matter, the discrepancy is striking. The reason regarded as most important by the pupils (and second in importance by the teachers) was "laziness." Laziness, in its popular meaning, usually denotes weakness of character or moral weakness. In other words, pupils were much more inclined to blame poor achievement upon a moral weakness than upon lack of mental ability.[1] Better, it seems, to be a knave than a fool.[2]

The fact that a high value is placed upon intellectual ability does not mean that a young person's "peace of mind," his ability to live comfortably with himself, increases the brighter he is. In the bright, the average, and the dull alike there may be discrepancies between aspiration and achievement, between what is desired and life as it is. This is reflected in one study which shows little correlation between intelligence and happiness and in another which shows that there is little or no relation between the intelligence of high school pupils and the extent to which they are afflicted by "feelings of inferiority."

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[1] "Laziness" actually represents quite a complicated set of factors, ranging from lack of ability or motivation to poor physical health.

[2] Since teachers ranked laziness as the reason second in importance, it appears that they are quite ready to charge failure both to intellectual and to moral weakness. In passing it may be noted that pupils and teachers agreed in assigning relatively low importance to "Dislike for teacher" and "Clubs and teams" and "Dates" as causes of school failure; they also agreed in attaching rather high importance to "Hard to study at home." Teachers attached less importance than did the pupils to "Dislike for subject" and "Sickness."

OTHER DEVELOPMENTS

By the end of the adolescent period the young person is usually expected to have taken a number of steps toward the orientation to life that is characteristic of the mature, self-contained adult. These steps are not solely intellectual in character, for emotional factors and cultural forces come into play. Note also that we speak of steps in this direction rather than of a completed process. Actually, the process of maturing in one's outlook upon life, in notions about one's self, in ideas and attitudes with regard to values, and in standards and ideals continues throughout the span of life.

One feature of this process of maturing consists in increasing intellectual acceptance of the everyday habits of the adult world. For example, between the middle teens and the middle twenties the young person slips mentally as well as physically into a more sedentary mode of life. During this period he also is progressing rapidly in the process of accepting adult attitudes and practices, whether for good or for ill. One large-scale survey indicated, for example, not only that there was an increase from age sixteen to twenty-four in the percentage of young people who drank alcoholic beverages but also, and more interesting to the present purpose, an increase in the percentage of abstainers who were not opposed to drinking by others.

"FINDING THE SELF"

One aspect of orientation to a mature concept of life has been described as involving the process of "finding the self." Included in this process, presumably, is the establishment of some kind of notion of one's place in the scheme of things. One writer on adolescence has described the finding of the self as involving the establishment of a hierarchy of purposes—with certain purposes or goals that come first, then others that have lesser rank but still are important. Under this general heading may also be included the individual's ideas with regard to his own lacks and powers, recognition of limitations in his make-up, awareness of ways in which he differs from this person and that person, realization that he does not have the omnipotence with which at an earlier age his fantasies so easily endowed him.

Needless to say, many factors go into the making of the young person's ideas concerning himself and his role. Anything that gives him a chance to try himself out will contribute. His self-evaluation will be influenced by experiences of success or failure, by opportunities to assume and carry responsibility, by the opinions expressed and the attitudes betrayed by others. His concept of himself in the role of a young adult will be influenced by the examples set by others, including his teachers, figures in the public eye, and perhaps, in subtle ways, by the models he finds in his reading of literature, history, and biography, and through impressions gained by way of movies, radio programs, and the like.

MORALS

By the time children reach adolescence their ideas with regard to the rightness and wrongness of things show a high degree of resemblance to the ideas of adults. By the end of the adolescent period the young person is likely to be very similar to the adult not only in his ideas of right and wrong but in many of his ideas on duty and the value of various virtues.

As individuals or as groups adolescents may question and re-examine precepts which they had accepted more or less without review when they were younger. In the process they may show some departures from the moral views held by their elders. The urges that occur in adolescence and the strivings for independence and for a taste of the privileges of adult life may lead some youngsters for a time to have moral values that seem different from those entertained by their parents. Even so, children continue to be creatures of their previous upbringing. Adolescent development brings no great amount of new light on the moral problems of the universe. Even in his reaction to physical urges and to desires for independence the child will bring to bear the effects of training he has received since he was an infant.

One result is that even when adolescents seem to be kicking up their heels or to be leaning toward the ways of the flapper or of flaming youth they are likely to be moved by moral scruples which are much the same as those of their elders. As against this, there is, of course, the fact that some impulses are stronger in the youth than in the older person. The youth also lacks some forms of wisdom and discretion that only age can bring. As a result, the incidence of waywardness in the form of various kinds of delinquency and of other less serious forbidden acts is greater during adolescence than during later stages of maturity.

RELIGION

Even though it is not the function of the public school to teach the doctrines and practices of any religious denomination or sect, the role of religion in the life of the adolescent is still significant from a developmental and educational point of view. A few aspects of this subject will be noted.

First, religion is a matter of importance to a large proportion of young people of adolescent age. Evidence to this effect comes from many sources, although it also may be noted that problems of a religious nature usually have not been found to rank as high as certain other types of problems when adolescents have been asked about their perplexities and concerns.

Surveys show that a large proportion (about half or more) of young people in their later teens regard themselves as members of a church and a large proportion of these attend religious services quite regularly. Again, studies at the high school and college levels indicate that the average young person leans much more strongly toward acceptance than toward rejection of religious beliefs, such as belief in the existence of God and the belief that He may have an influence on the individual's personal affairs.

Apart from this, there is the fact that religion is deeply imbedded in the culture in which the young person lives. The individual who has acquired some understanding of religion and who, even more, has had some experience in the sphere of religious faith and devotion, should be in a better position to understand his fellow creatures and to sympathize with their aspirations.

It may also be added that religion serves many important psychological purposes apart from the spiritual and eschatological meanings embraced by the devout believer. The young person's acceptance of religious teachings may help him to formulate his purposes, to organize his values, and to reinforce his moral scruples.

These considerations and others should lead the educator to have a profound recognition of the role that religion plays or might play in the lives of young people. Certainly such recognition would mean that teachers at the high school and college levels should not resort to crude methods of ridiculing or debunking the religious beliefs of their students. Such a stand should be avoided if for no other reason than that of respect for others.

SOCIAL DEVELOPMENT

RELATIONS WITH PEERS

The process of identification with the life of his peers which began when the child was quite young is hastened and strengthened during the adolescent period. This process is calculated to enable the young person eventually to stand on his own feet as a member of an adult society of his peers. The process is complicated by the fact that during adolescence the young person not only is establishing himself within his own sex group—as was notably true during elementary years—but also is called upon to establish himself in the eyes of the opposite sex.

SOCIAL CLEAVAGE

One aspect of an individual's social development consists of an enlarging definition of himself as a person. A phenomenon associated with this is a tendency toward increased awareness during adolescent years of group differences and affiliations. The young person is likely to feel himself more distinctly a member of a certain racial or national or economic or religious group than was true at an earlier time. This process may be quickened by concerns that arise within the child himself and by pressures brought to bear by parents, as the youngster moves nearer to the age when he is ready to court, to mate, and to settle down.

Some time during adolescence the youngster is likely to be more definitely aware of differences between himself and others in family background and financial status. Differences on the latter score may bear harder upon girls than upon boys. Also, it has been noted—in the sphere of race relationships, for example—that as children approach or reach the adolescent stage there is less choice of companions across racial lines than was true in the earlier elementary grades.

It is not, of course, implied that in adolescence the young person has finally settled down into a rigidly defined caste or class. It is well to bear in mind, however, that adolescence is a time when many young people are likely to incorporate into their own ways of life and modes of thought the cleavages that prevail in the adult society in which they live.

In keeping with this, adolescents who belong to groups against which there is prejudice or discrimination are likely to experience the impact of such discrimination more acutely than was true during earlier years. Further, the variety of motives that come more strongly into play, including the prospect of economic competition and the pressures bearing on the selection of a mate, may have a distinct effect upon the individual's attitudes toward others. At an earlier age he may have been steeped in ideas of tolerance and may have acquired, in theory at least, a good will and a good heart toward all his fellow men. Now, when he comes to make choices and decisions that will affect his way of life he may show what in practice apparently amounts to a prejudice.

In line with the foregoing, when we strive to educate for good will between peoples it is important that we recognize the fact that lessons in good will may have different meanings, and will also involve different practical issues, as children move from early childhood through the adolescent years. It is likely, also, that education to this end during the high school years will be more effective if there can be candid discussion of some of the practical issues involved.

CHANGING AND CONTINUING SOCIAL STANDARDS

The personal qualities a-building since the child was an infant go with him into the adolescent years. They continue to influence the way in which he faces the social problems of adolescence and the extent to which he is accepted or rejected by other children. New forces also come into play, however, as heterosexual interests develop and as the young person moves toward more adult ways of behaving. As a result, there may be shifts in popularity and prestige. The girl who was a popular tomboy may find her tomboyishness no longer an asset. A boy (or a girl) may now reveal qualities which make him attractive to the opposite sex, and this, in turn, will have an effect on his standing with members of his own sex.

Apart from these factors, there are other changes in the value or merit which a child's associates attach to various personal characteristics. Following are some findings obtained in an investigation in which a group of over 300 children were studied at the age of twelve and again at about the age of fifteen. The aim of the study was to note the evaluation which adolescents themselves placed on various traits and qualities. The results showed that during the twelve- to fifteen-year period there were greater shifts in the values held by girls than in the values held by boys.

At twelve years, boys emphasized, in evaluating each other, the desirability of activity. They tended to prefer the more aggressive and boisterous forms of behavior to the more submissive and reserved. They also showed high respect for skill in group games. At the fifteen-year level, among qualities associated with prestige were physical attractiveness, social ease in situations involving the two sexes, and excellence in physical competition. One quality had been added, it can be noted: ease in situations involving the two sexes. A notable shift occurred with respect to the matter of tidiness and grooming. At twelve years a boy's prestige did not tend to be adversely affected if he were unkempt in appearance. At fifteen years, on the other hand, unkemptness was a liability.

The qualities most acceptable in twelve-year-old girls, according to their own evaluations, included gracious and ladylike ways, friendliness, good humor, and pleasing appearance. At fifteen years the girls put less value on demure, ladylike, and conforming kinds of behavior. They now placed higher value on being a good sport, being attractive to boys, and on qualities that imply more daring and aggressiveness than seemed to be prized at twelve.

Apart from the foregoing, the findings in this study lead to the interesting conclusion that the boy who has qualities that make him attractive to the other boys is likely also to have the qualities that make him attractive to girls. On the other hand, the qualities that make a girl attractive to boys may be quite distinct from the qualities that make her attractive to other girls. It appeared that to be successful with girls a boy must be admired by boys, but that girls who are successful with boys may be either liked, disliked, or regarded with indifference by other girls.

These observations seem to indicate that during the early teens girls face a somewhat greater problem of social adjustment and readjustment than do boys. Systematic observation of children during their free activities also appeared to bear out this finding. Girls tended more than boys to show signs of uncertainty, as indicated by a desultory interest in the objective environment, unorganized activity, symptoms such as giggling or screaming in response to trivial stimuli, and an egocentric interest in their own persons.

Sexual and Heterosexual Interests and Adjustments

As was noted earlier, physical and physiological phenomena associated with the maturing of the sexual functions are features in a larger constellation of events which involve many emotional and social aspects of the lives of young people. Under the present general heading are discussed matters ranging from sex interests and behavior as such to love and courtship, and some of the concerns which arise in connection with these interests.

SEX BEHAVIOR

As indicated in an earlier chapter, findings from a variety of sources show that a large proportion of children have been curious about sex, have received distinct impressions, and have experimented in one way or another before they received anything approaching systematic education relating to sex.

There is the further fact that nature, intent upon ensuring the perpetuation of the race, has endowed young people with powerful sex urges. As against this, there is the obvious fact that powerful social, moral, and religious influences are brought to bear to restrain and regulate these urges. One intent, among many, of these pressures is to ensure responsible parentage for children that are born. Caught between these opposing forces from within and without, the young person has much to contend with during the period of "sexual unemployment" referred to earlier.

Where there is a problem there usually will be attempts at solution. When many persons face similar problems there are likely to be many different solutions. In a large number of cases a more or less makeshift solution is found which combines a high degree of conformity to the usual moral standards with a certain amount of transgression of the rules.

MASTURBATION

The most common form of transgressing rules of what has been considered to be perfect sex conduct is by way of masturbation. Various studies indicate that upward of 90 per cent or more of boys practice masturbation once or oftener during short periods or during periods of months or years during adolescence. Findings in corresponding studies of girls have shown frequencies ranging from 15 per cent upward to 60 per cent.

Findings such as these indicate little more than the fact that the practice is common. They do not indicate whether the practice is good or bad or indifferent in its effects. Certain facts and viewpoints, however, may be mentioned. On the factual side, several studies have shown that many of those who engage in the practice feel very guilty and disturbed about it. Such feelings of guilt and other forms of emotional distress are likely to be more acute if the youngster has been threatened or frightened by exaggerated ideas of the effect of the practice on his sanity, health, and future well-being.

In recent years writings and discussions on the subject treat the practice of masturbation with more composure and with considerably less emphasis on possible dire effects than was true in earlier writings. Whatever may be the good or ill effects of masturbation from the psychological point of view, as a means of relieving tension or reducing the urge to satisfy sex desires in ways even more strongly disapproved, the fact that the practice prevails so widely and that it may be accompanied by various emotional results certainly should be borne in mind when we try to understand the adolescent and when we consider his educational needs.

HETEROSEXUAL ACTIVITIES

In one recent study conducted in a large midwestern city, the investigator reports that 44 per cent of adolescent boys said that they had experienced sexual intercourse by the age of eighteen. This does not mean that the practice was habitual, for in over half the cases the experience had occurred once, twice, or upward to five times, according to the report of the boys. Undoubtedly the incidence of the practice would be found to vary in different localities and communities.

Findings with respect to girls (obtained mainly from reports by women who had passed beyond the high school level) indicate that the incidence with them is considerably lower, representing perhaps half or less than half of the corresponding incidence for boys.

In connection with such heterosexual activities, perhaps to an even greater extent than in connection with autoerotic practices, there is likely to be a good deal of emotional upheaval. The fact that the taboos are powerful, even though they may be violated by a certain number of young people, is stressed by the observation above to the effect that most of the boys who had had sex experience had made the venture only once or a limited number of times.

The incidence of masturbation and sexual experimentation represents, of course, only a small feature of the larger account of developments in the sex and love life of young people of adolescent age. Findings with regard to the incidence of such practices do, however, bring out into the open certain problems that secondary education has largely ignored. This problem involves not simply sex practices as such, but the larger problem of urges, interests, aspirations, and values that come into play as the young person moves toward marriage, mating, and the establishment of himself as a responsible member of a family.

It is likely that problems presented in these areas cannot best be handled in isolation. One aim in sex education is to help the individual to integrate rather than divorce his sexual desires and the capacities for sentiment, affection, and loyalty that come into play when a person is in love with someone of the opposite sex. A young person is likely to face added problems if his physical desires are in one compartment and his romantic ideals and aspirations in an entirely different compartment. Even if he does not make trouble for himself, he is likely to make trouble for others.

An extreme of such compartmentalization is found if an older adolescent boy, for example, looks upon some girls as convenient means of gratifying physical desire, and then has an entirely different set of standards when he thinks of falling in love or marrying. Again, at a still later stage the issues involved in sex morality take on a different complexion if they are viewed in terms of the individual's responsibility to his family rather than if they are viewed simply as arbitrary rules relating to sex activity as such.

COURTSHIP ACTIVITIES

Courtship activities range all the way from stopping to take a second look at a member of the opposite sex to the fervent enterprise of wooing and winning a mate.

The time at which interest in the opposite sex becomes active and the ways in which this interest expresses itself vary so much from child to child that precise "norms" would be hard to establish. There are, however, some more or less characteristic manifestations. From the point of view of timing, it appears that in many children there is a lag between the time when the primary physical marks of puberty show themselves and the time when interest in the opposite sex comes strongly to the fore. A study of a group of 171 girls of college age included the question, "At what age were you first interested in 'going out' with boys?" The answers ranged from ten to eighteen years (with the exception of four girls who reported that they had never been interested). The median age (age at which 50 per cent had acquired this interest, according to their own reports) was fourteen years. If the recollections of the girls on this point can be trusted it would indicate a lag between this particular expression of interest and the average age (about 13 years) of first menstruation. The wide range in first appearance of this interest is, however, quite as noteworthy as the median. A similarly wide range would no doubt be found if an equivalent study were made of a group of boys.

The particular expression that interests in the opposite sex assume seems also to undergo change with age. In the first phase of interest, some children seem to revert to social behavior characteristic of children of a much younger age: there may be a good deal of watching and "parallel" behavior as boys and girls form in clusters of their own, furtively eyeing each other while carrying on no organized activity of their own. Again there may be chasing and pushing and tussling, reminiscent of the fracases of nursery school children. At first, also, in some children, the interest may be quite at random and then, with the passage of time, it becomes more selective, as a youngster passes from a period when he pays attention to almost any member of the opposite sex to a period when he centers his interest primarily on one person or a chosen few. In other words, the interest tends to progress from a more generalized to a more specialized phase, although ordinary observation shows that even adults differ considerably in this respect.

While the expression of this interest moves, all being well, from exploratory and rather awkward beginnings toward greater smoothness and poise, there also may come a strengthening of drives. The median girl in the study mentioned above, who reported her first interest in "going out" with boys at fourteen years, reported that she petted or "spooned" for the first time between the age of sixteen and seventeen years (the range was from 12 to 25 years, and 8 per cent had never indulged). There is a difference here of about two years. This difference is not, of course, due solely to developmental factors in the young person herself, for social conventions also operate; for example, while the median girl was interested in going out with boys at fourteen she was not permitted to "keep company" until the age of sixteen.[1]

CHARACTERISTICS REGARDED DESIRABLE IN THE OPPOSITE SEX

The "courtship ideals" of adolescents throw an interesting side light on the values entertained by young people of adolescent age. In one study, high school and college boys rated traits regarded as desirable in girls, and girls gave similar information with respect to boys. "Real brains" was the trait prized most in a person of the opposite sex by high school sophomores, juniors, and seniors, and by college men and women. "Good health" was another high ranking item in all groups. Certain items received consistently low ranks in the returns from all groups, including such features as "good dancer," "clever line," "spends money freely."

"Dependability" gained in value with age: at the sophomore level it was ranked seventh in importance by the girls, but at the college level it had a rank second only to "good brains," and in the returns from the boys there was a corresponding rise from ninth place to third place. "Considerateness" also showed a marked increase in relative value. As against this, some traits showed a decline in relative value: "hard worker," "sex purity," and "cleanliness" showed a loss in rank, even though they continued to remain quite high on the list at all levels.

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[1] The median values found in this study may or may not be representative of the population at large; even so, the difference in timing of the various events is noteworthy.

The outstanding difference between boys and girls appeared with respect to "good looks." This item ranked third at the high school level and second at the college level in the list of qualities boys regarded as desirable in girls, but it stood rather low (eleventh) when girls rated qualities desirable in boys.

This tendency of boys to put a higher premium, in theory at least, upon good looks might be interpreted to mean that they are more superficial in their judgments than are girls. On the other hand, it might mean that they are more profound. It might be that the difference, as here shown, is not entirely genuine, for the phrasing "good looks" no doubt comes nearer to describing the qualities that make a girl physically attractive to boys than the qualities that make a boy "handsome" or "attractive" in the eyes of girls.

Most children during adolescent years go through a lengthy process of learning in their dealings with the opposite sex. These learnings range all the way from the experiences involved in gaining a certain amount of ease and facility in talking to members of the opposite sex to the more turbulent experiences involved in being in love. In connection with this learning process, most adolescents face problems that are not easily answered. The fact that courtship involves practice, as do other forms of behavior, appears in findings to the effect that the average young person falls in love not once or twice but several times. In one study (dealing only with women) it was found that 18 per cent of the normal married women in the study reported that they had been in love once or twice; 34 per cent reported that they had been in love three to five times; and the remaining 48 per cent reported that they had been in love from six to twenty times. The median for the group was between three and five times.

In connection with their dealings with the opposite sex, adolescents are perplexed about many questions of etiquette, custom, and propriety. The queries they raise cover a variety of problems, such as: How does one introduce one's self to (or get rid of) a dancing partner? Do boys (or girls) expect you to kiss them good night? Do you have to pet to be popular? How can I learn to keep up a smooth conversation? Should one go steady with one boy or girl, or keep company with several? What is the meaning of true love? Many other questions could be added to this list. From various studies it would appear that when young persons ask these or similar questions they are not interested solely in matters relating particularly to their sexual urges or in the question of what they may be able to get away with and what they may not. Many of the questions reflect a seriousness of purpose and a profound concern about the larger issues involved in courtship and prospective marriage.

Many questions do not call so much for a "yes" or "no" answer or a simple prescription as for an opportunity to talk things over with somebody else. Some reveal mistaken notions or perplexities that members of one sex may have with regard to the other. Some might perhaps best be treated in discussions limited to members of only one sex, while others dealing with the responsibilities of both sexes might best be discussed when boys and girls are together.

IMPLICATIONS

The discussion above has touched briefly on matters of vital concern to young people—matters which should also be of concern in the educational program. Many practical suggestions have been made with respect to the handling of sex education at the high school level. We shall review only a few more or less obvious points. A program of sex education (which might better, for practical purposes, be called by a different name or come by way of units with various names) should be conceived broadly to deal not simply with certain features of sex hygiene or with sexual functions as such. Matters relating to anatomy, physiology, and reproduction should, so far as possible, be integrated with a consideration of larger human issues, such as the responsibilities connected with having and rearing children.

Some teachers on a high school staff are likely to be better able than others to handle these topics. Moreover, to handle them may require courage as well as ability and good sense. Indeed, it may be found that a teacher who has dealt successfully with them from the point of view of the pupils and their parents will be frowned on by some fellow teachers.

Attempts at providing a sound program in this area would require a certain amount of experimentation with methods of presentation, ways of organizing and conducting group discussions, and the like. There is no rule of thumb for dealing with the problem. As indicated above, however, any procedure that would enable young people to reach a common understanding and arrive at something of a solution to problems common to both sexes should be helpful. Another obvious point is that the program should take account of the parents' angle.

Several aspects of the problem are in need of research on the developmental side. One line of research should deal with changes in the form of children's concern as they move from the early adolescent into the late adolescent period. On the basis of ordinary observation it would appear that the young person in the early teens does not view problems in this area primarily from the point of view of preparation for marriage. On the other hand, at a later time these same young people might be interested in many of the issues and practical everyday problems that marriage and family life would involve. This represents only one angle. There are additional features in need of further study, including among others, the way in which young people at various maturity levels formulate or express their questions.

Apart from the education that may be offered by way of the classroom, it would be well if those who assume leadership in education would take more initiative in facing the problem of sex education and all that it implies. Educational neglect of problems presented by sexual aspects of human development has been due, in part, to several factors, such as fear of touching a somewhat dangerous topic, fear of seeming to be unduly interested, fear of making proposals or innovations that other educators might not support. It has also been due to timidity, based on the fact that the responsibilities of the educator have not been well defined and that the moral, sociological, and biological issues have not been thrashed out.

PARENT-CHILD RELATIONSHIPS

While the adolescent is striking off on lines of his own, his parents and his home continue to be of great importance in his life. He needs the anchorage which the home affords. It is important to him to be able to count on his parents as persons who regard him with disinterested affection and in whom he can confide without fear of ridicule or betrayal.

He needs the home as a base of operations that is stable when other things are in flux. He also needs the home as a place where he can relax, let down his hair, so to speak, and give way occasionally to petulance, complaints, and childish behavior which he would not allow himself to display in his relations with his peers or with adults outside the home.

AFFECTION AND FRICTION

At the adolescent level, as at earlier levels, the home life of the child is not likely to be a continual feast of love. The normal home has its quota of bickering and disagreement. One of the functions of a good home is to serve as a place where husbands, wives, and children can become annoyed with each other without suffering dire consequences. The more solid the affection between members of the family, the more will each feel free to be himself.

Friction in various forms is almost inevitable if the home is peopled by real persons. As the child reaches out for independence and seeks to take on the ways of the young adult, he is likely to show forms of behavior that parents feel moved to restrain or criticize. The child may become critical of the manners and habits of his parents, the appointments of the home, the make and model of the family automobile, the tastes, manners, and interests of his younger brothers and sisters, and the like. Some time during the adolescent period many young people try to reform their folks. In the process, the parents have a chance to learn from the child, and the child from them.

The issues that arise in the home may range from trivial to serious matters. A large proportion of girls and boys are likely to feel that their parents are after them too much on certain matters, such as dress and grooming, table manners, use of lipstick, taste in clothes, regulations with regard to use of the family car, rules against late hours, demands that younger siblings go along with the adolescent, and so on. Occasional disagreements on these matters are part of the game.

It is well, however, for parents to review their ways from time to time. At the adolescent, as at the preschool level, it does not pay to insist on perfection overnight or to go too far toward forcing an outcome that is likely to emerge in due time. This is illustrated in connection with grooming, cleanliness, and tidiness of person. At twelve a boy may take pride in being unkempt. At fifteen or sixteen the same youngster may go to the opposite extreme and become, if anything, too much of a dandy. Now there may be friction because he monopolizes bathrooms and mirrors, and "borrows" his father's shaving lotion and ties. This example is not presented as typical, but it illustrates possible shifts in behavior.

Some of the issues that arise between parents and children are likely to touch on relatively serious matters, at least from the parents' point of view. In his efforts to be a grown-up, the young person may show more zeal than wisdom in his desire to try new things. He may also overestimate his own powers and underestimate the wisdom of adult counsel.

This is illustrated by issues that sometimes arise with regard to the use of the automobile. The young person may be impatient to take charge of the driving and eager to be allowed to use the car unaccompanied by other members of the family. He may also get the notion that he is a more finished and expert driver than either of his parents. He may actually be right in this idea, but may fail to realize that his parents have reason to be concerned. Statistics show that the automobile accident rate is higher in the younger age brackets than at more mature age levels. Undoubtedly more is involved than skill in driving as such. The younger person may be more impulsive, more given to speeding and showing off, less seasoned in his judgment about hazards that might lie ahead, less prudent in being on guard against the things that other drivers may do.

The relationships between parents and children may be influenced by profound emotional issues that go beyond practical disagreements such as those illustrated above. Through a series of unfortunate earlier experiences or as a reaction to personal setbacks at the adolescent period, the child may become bitter and resentful, may blame his parents for his difficulties. His attitude may go beyond the normal range of bickerings to a condition of deep-seated apathy or revolt.

The emotional climate of the home, the extent to which parents and children accept each other or have pervasive feelings of opposition, not only will have a bearing on the adjustments made within the home but may also have a profound bearing on behavior in the young person's life outside the home. According to one study, boys who had become delinquent had weaker emotional ties with their parents than did boys, in similar neighborhoods, who were not delinquent. Moral precepts that are taught at home are likely to have a stronger effect if they are flavored with affection, much as the admonitions of one teacher who is loved or respected will have more weight than similar admonitions from another who is not.

Again, emotional experiences within the home may have a bearing on a person's attitudes toward affairs in the world at large. One writer suggests that revolt against established institutions may be associated with repressed antipathy toward a father. Another investigator reports that a group of active young radicals had less satisfactory relations with their parents and lower self-satisfaction than a control group; on the other hand, young men (of college age) with good family morale tended to be more conservative. Yet another investigator reports that avowed radicals showed more frequent feelings of rejection by their parents and, in general, more unhappiness in childhood.

Findings such as these suggest that aggressive feelings which are engendered in the home may unwittingly be "displaced" or projected upon the existing order of things in the world at large. Such displacement may be promoted by the fact that barriers against admitting to one's self that one is rejected by one's parents, or against openly expressing antipathy toward them, usually are stronger than barriers against some forms of revolt which are more abstract and impersonal in nature.[1]

Even where there is real mutual affection, parents may have difficulty in adjusting emotionally to the fact that their baby is now becoming a young man or woman. The process of "letting go" is likely, at best, to involve certain difficulties for parents. They have lived with this person from the time he was a helpless infant. They know his weaknesses and foibles. By reason of close association with his ways at home, and considerably less opportunity to see him fend for himself outside the home, it is easy for them to overestimate his childishness and to underrate his ability to hold his own.

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[1] These studies, and the present review, do not deal with the relative merits of conservatism or radicalism as such, or with the many factors, other than personal experiences in the home, that come into play, not only in determining what constitutes "radicalism" and "conservatism" but also in determining the direction toward which a person will lean.

Other factors also come into play. Parents have a tremendous emotional investment in the child. Besides, both parents, but notably the mother, have built strong habits in dealings with him. The rearing of children is, of course, one of the major features of the life work of the mother. This has been her occupation. Now, as children leave the parental roost, she is in danger of losing her job. Some parents seem to welcome this, especially if the girls are married off safely and the boys are in a fair way toward making a good living. Other parents have difficulty in adjusting even when things are going well for their children.

Parents are likely to experience greater difficulty in "letting go" if they have not been preparing themselves and their children for this process from the time of early infancy. Actually the child's impulse to be on his own does not arise suddenly during adolescent years. As we have noted earlier, even the one-, two-, or three-year-old is striking out for himself in various ways. From an early age the child seeks to have a voice in his own affairs, to assert a degree of independence. Already during preschool years, if given the opportunity, the child plunges into projects with other children which are distinct from his undertakings with his parents, and to that extent represent a mode of life of his own.

This process is intensified during elementary school years when life with his peers becomes increasingly important to the child and when, if given the opportunity, he will have understandings with other children and participate in enterprises which his parents know nothing of. A part of the business of "letting go" is to respect and even encourage wholesome efforts along this line rather than to seek continually to possess the child and to stay in intimate control of his thoughts, interests, and emotions or to participate in them. This does not mean that the parent should love the child less as the child grows older. It merely means that he should love his youngster as a person who, in changing ways, has a right to a life of his own.

Apart from the functioning of habits and emotional ties which inevitably arise in relations between parents and children, forces of an unwholesome sort may enter to interfere with the weaning process. Difficulties are likely to arise both for the parent and for the child if the parent is seeking through the child to realize emotional satisfactions not achieved in other areas of the parent's life, or is seeking through the child to realize gnawing ambitions or to compensate for failures and frustrations. Again, the more disordered the mental life of the parent—the more he may be suffering from feelings of inferiority or guilt, the more he is troubled by conflict over unresolved problems in his own life—the harder it is likely to be for him to keep an even keel as his child makes the transition from childhood to adulthood.

EDUCATIONAL IMPLICATIONS

The foregoing represent only a few of the many factors that enter into parent-child relationships and that may help or hinder the final stages of the child's process of weaning from the parental home. Although teachers usually are not directly involved in this process, it is important for them to understand some of the forces behind it. It is important also for teachers to be quicker to sympathize than to condemn. This note is stressed in earlier sections, and it is proper to emphasize it again. It is all the more true by reason of the fact that the literature on mental hygiene aspects of adolescence has frequently carried an undertone of accusation and complaint directed at parents.

It is important to recognize that parental attitudes and practices which may seem unwise to an outsider do not spring from sheer perversity. The parent, like all other human creatures, has his problems. He is likely to have certain fears and anxieties by reason of his position as a parent. Moreover, simply from a practical point of view, the parent is in many ways legally and financially responsible so long as his child is a minor.

Recognition of the importance of parent-child relationships during adolescence does not mean, of course, that issues involved therein represent the exclusive or major concerns of children. The relationships between the child and his parents may be the crucial feature in the child's adjustment in individual cases. In other cases these relationships may be so wholesome and constructive that they present practically no problem at all.

While, in keeping with this idea, we should not unduly magnify the issues involved in parent-child relationships, it still is proper for education to take cognizance of this aspect of the adolescent's life. This is all the more true by reason of the fact that parents and children sometimes needlessly misunderstand each other. Undoubtedly in many situations it would be helpful if parents and children, under the auspices of the school, could have an opportunity to express their grievances and concerns and, by way of an open forum, find the basis for a common understanding.

Such a forum might deal with quite specific problems that happen to arise in a particular community. In one community, for example—and there undoubtedly are many like it—children in their early teens conspired together to prolong their dances and parties into later and later morning hours. Each youngster strove to keep his particular parent from being the first to call to take him home, for the arrival of the first parent for this purpose was a signal for breaking up the party. (The youngsters were still below legal driving age and distances were so great they had to be called for.) In this situation the parents, acting singly, were at a disadvantage. In such a situation an opportunity for the parents to present their concerns (and incidentally to discover that each of the other parents faced much the same problem) and for the young people to express their side of the case might have led to a solution both groups could accept. This might also have obviated the necessity for parents and children to make an issue of the matter each time a party occurred.

Examples could be multiplied many fold. We are not here proposing that all schools should add responsibilities in this area to all their other responsibilities. It is suggested, however, that such problems should receive prominent attention when plans are being made on what the school program should and should not embrace.

EMOTION IN ADOLESCENCE

In the foregoing sections it has been noted how the emotional life of the adolescent is involved in all the various aspects of his development and behavior. During adolescence, as during earlier and later years, emotional experiences are coextensive with all the activities and strivings that go into the business of being alive. Some concerns continue throughout life; some concerns are prominent during a given phase and then recede.

In keeping with this, much of the emotional life of the adolescent revolves around issues that were present in earlier years. In addition, new issues emerge, as we have seen in the foregoing. The way in which the young person continues to deal with the old issues and the way he adjusts to the new will be determined by his past adjustments, and by the exigencies of the present.

Currents in the emotional life of the adolescent may roughly be grouped under certain broad headings, all of which overlap. First, there are concerns of a primarily personal sort, concerns that arise in the child's private life with himself. Here may be grouped feelings of inferiority and the opposite, feelings of guilt or pride with respect to the past or the present, feelings of apprehension or of pleasant anticipation concerning the future, feelings involved in self-discovery and in the experience of change in one's physical, mental, and emotional make-up.

Another large group of feelings relate to the young person's relations with other people. Here fall the strains and satisfactions that are involved in his relations with his parents; the stresses, resentments, fears, and joys that arise in dealings with his peers and in his heterosexual interests.

Still another group includes states which are not primarily egocentric in nature nor social in orientation but which involve the vast range of frustrations and satisfactions encountered in the exercise of mental, motor, and physical capacities, in work and in play, in reading, radio listening, and the like, in coping with the physical environment, in mastering subject matter at school, in learning new skills, in earning and spending money, in exercising new liberties or powers, ranging all the way from traveling on one's own to going alone to the store to buy a new dress or a new suit of clothes.

In adolescence, as in earlier years, fears, joys, and resentments may come by devious routes, difficult for others and even for the young person himself to understand. When he is irritated by his father's table manners, his actual motivation may be a fear that a visiting girl friend might get a poor impression of him and his family. His apparent enthusiasm for a certain political candidate may be less a form of enthusiasm for the candidate himself than a means of venting his personal feelings against certain people or groups symbolized by the candidate on the other side.

To understand the emotional life of the adolescent it is necessary to try to take into account the many forces, apparent as well as hidden, that operate in his life. To do this is difficult at best, and it is rendered all the more difficult by the fact that we tend to appraise the emotions of others in the light of our own experience. An adult who has earned his own way through school may be rather insensitive to the problems a young person may face by virtue of the fact that his way is being paid. It is difficult for the adult, in dealing with an adolescent, to divorce himself from prejudices arising out of recollections of his own youth. If the adult had a "hard time of it" he may feel that the adolescent should have a hard time too, not realizing that hard times may come to different persons by quite different routes.

The adult may swing to the other extreme and seek unduly to protect the young person from experiences which the adult recalls with bitterness or remorse. A parent who takes pride in the hard struggle he had when young may try unduly to make the going easy for his child. In the process he may rob the child of the opportunity to develop some of the initiative and enterprise which the parent prizes in himself.

ADOLESCENT INTERESTS AND THEIR IMPLICATIONS

What follows will partly summarize, partly supplement, points already made with respect to main currents in the interests of adolescents.

SOME CHANGING AND CONTINUING INTERESTS

A picture of persisting as well as of changing interests during the adolescent period is offered by M. C. Jones in a study in which an Interest Record was administered to 142 boys and girls, beginning when the youngsters were in the sixth grade and continuing each year until they had reached the twelfth grade. When the youngsters annually checked things they would like to own there was a sharp drop in the percentage of boys and girls who selected such items as a stamp collection, a magician's outfit of tricks, marbles, roller skates, a set of paints, a bicycle, a pony. Quite as significant are the things more than half of the young people throughout the years from the sixth to the twelfth grade desired to own: an automobile (three-fourths of the children at the sixth grade, practically all the children at the twelfth grade), a canoe, a camping outfit, a tennis racket, a piano, and (in the case of boys) a gun, a hunting knife, and a football.

In view of the marked decline in children's interests in a variety of other games and physical activities as they move toward and into adolescence, the continuing high vote for a canoe, a camping outfit, and a tennis racket is especially noteworthy. In keeping with the interests here expressed is the finding, in this same study, that "a long hike" received practically as many votes as "a movie" at the twelfth grade level, when these two items, along with certain others, were presented and the young people were asked to indicate which they preferred.

A sharp decline in the "gang" interests strong in many children with the approach of adolescence appears in responses to the item, "secret clubhouse." At the sixth grade, 82 per cent of the boys and 74 per cent of the girls checked "secret clubhouse" as a place where they would like to go; at the twelfth grade the percentages had dropped to 34 and 32. Under the same heading of "Places to Go" there was also a marked drop in the percentage of youngsters who chose to go to an art class, and also a decline, although not so pronounced, in the percentage choosing to go to a museum, "a deep cave," and a zoo. There was little change in the percentage choosing to go to a band concert (but this item was chosen only by a minority of children at all grade levels); as against this, there was a notable increase in expressed interest in the opera: 29 per cent of boys and 49 per cent of girls at the sixth grade indicated they would like to go to an opera as compared with 49 per cent and 80 per cent, respectively, at the twelfth grade.

Under the heading of "Places to Go" as under the heading of "Things to Own" some items stood conspicuously high in interest throughout the period from the sixth to the twelfth grade, including a bathing beach, a horse race, a rodeo, and (high throughout, but with a tendency to decline) a roller skating rink. "A fancy dress party" as a "place to go" was chosen by a considerably larger percentage of girls than of boys, but an increasing percentage of both sexes chose this item as they advanced through the grades. More girls than boys similarly voted for "a good dance hall," but the sex difference was not as marked as in the case of "a fancy dress party," and there was only a relatively small sex difference with respect to this item (68 per cent of girls, 60 per cent of boys at the twelfth grade level).

In one section of the Interest Record, "Magazines to Read" were presented in pairs to the tenth, eleventh, and twelfth grades. In one such pair, "a motion picture magazine" was much preferred to "a news weekly" by tenth grade boys (65 per cent and 35 per cent) but at the twelfth grade level the vote was evenly divided. Girls also showed an increasing vote for the news weekly but at the twelfth grade three-fourths of the girls still favored the motion picture magazine.

One of the most pronounced shifts in interest appeared when a "detective story magazine" was paired with "a magazine with articles about the government and world affairs." The "detective story" was far in the lead in the vote of both boys and girls at the tenth grade but at the twelfth grade, "world affairs" won about half the votes of the boys and about two-thirds the vote of the girls. On the other hand, "a 'western story' magazine" was preferred by boys (but not by girls) to "a magazine about arts and crafts" at all of the grade levels (although there was a declining vote for the "western story").

In most of the comparisons it was found that there was an increase from the tenth to the twelfth grade in preference for factual, realistic reading matter as compared with material dealing with glamorous, fictional, or romantic characters. As indicated, there were marked sex differences: girls are drawn more strongly toward the glamor of motion picture and radio characters, while the interests of the boys run more strongly to the "western story" and fictional detectives.

The findings in this study throw an interesting side light on a matter which was discussed in the preceding chapter, namely the ignorance shown by many adults as well as children with respect to political, economic, and social affairs. The study was conducted over a seven-year period, terminating in 1938, years of important news events having a bearing on public welfare and on private lives. Yet at the twelfth grade level—a time when these young people were standing near the threshold of adulthood—50 per cent of the boys and 75 per cent of the girls would rather read a motion picture magazine than a news weekly; and 62 per cent of the boys and 80 per cent of the girls preferred to read about radio stars than about outstanding personages in world affairs.

These findings are commonplace, but arresting. Characters who imitate life, or who dramatize life on a stage at least one step removed from reality, have more appeal than characters who play the actual roles. Many factors, of course, influence a choice of this kind, including desires discernible in earlier childhood for vicarious experience of a story-book sort. From the standpoint of the child's own desires, the life portrayed or represented in magazines about motion pictures and about radio stars may have more reality and substance, more emotional nearness, so to speak, than the life portrayed in an account of the news or in accounts of the lives of persons who come to grips at first hand with events that go into the making of news and of history.

Such preferences do not in themselves give reason either to condone or to condemn. But the fact that such interests exist has a practical bearing on the work of the school. For example, to the extent that such preferences already prevail, it will be all the more difficult to kindle an interest in much of the material normally included in the social science courses on citizenship, and the like.

CHOICES OF TOPICS OR UNITS OF STUDY AT THE HIGH SCHOOL LEVEL

More directly related to the work of the school than the study reviewed above is a survey (by Doane) in which high school pupils indicated the topics or units of study they would like to have included in the high school curriculum. First, a large number of high school pupils, without prompting, made a list of such topics. Then the material thus obtained was organized in terms of general areas and in each general area there were broad headings called "courses," each with a number of subheadings. One cluster of "courses" fell in what was called the "personal area," another represented "social areas," and a third, "other subject areas." The list, so organized, was then presented, more or less in the form of a ballot, to pupils in a number of high schools. Each was asked to check the five units he most desired, and the five he least desired, to have included in the high school program.

In the "personal area" a course on vocational choice and placement received the highest vote, both from boys and from girls enrolled in widely scattered high schools. Next in rank (when votes of both boys and girls were combined) was a course on "getting along with people." Third came a course on health. Fourth and fifth in rank were two courses relating to sex. One had the general title of "Sex"; the other "Relations with the Opposite Sex." (If these topics had been combined the rank might have been even higher.) Other courses in the "personal area" that received diminishing percentages of the votes included one on finances, another on plans for marriage and family life, another on philosophy of life and mental hygiene. Also in the running, but relatively much less popular than the courses first listed above, were units on relationships with the family, leisure time and recreation, morals, and religion.

When the pupils indicated the five courses they least desired, the order was approximately the reverse of the above. However, the percentage that voted against the least popular course was considerably smaller than the percentage voting for the most popular.

In the "social area" a course including various aspects of history received the highest vote (but the percentage was considerably lower than the vote cast for courses dealing with vocations, getting along with people, and health). "Government" came next in rank in the "social area" and "current problems" was a poor third.

Topping the list of four courses in "other subject areas" was one with the general title "Music, Art, Dramatics" (this scored higher than any course in the "social area"). Next came "sciences" (considerably heavier vote by boys than by girls), then "foreign languages," and, at the bottom of the list, "literature."

The preference shown for various projects as described above would of course be influenced by the meanings associated with such projects through past experience. Yet results from an approach such as this are provocative. They indicate that units of activity which are phrased in keeping with some of the major areas of adolescent experience and concern strike a responsive chord. They suggest also that courses which purport to bring to children the priceless cultural values imbedded in the sciences, in history, in literature, and in foreign languages seem not to have been presented in ways that hit the spot with large numbers of young people of adolescent age.

VOCATIONAL INTERESTS

As indicated earlier, a large proportion of pupils, sooner or later during their high school careers, give thought to their future life work. If the high school program is to be geared to the development of children, vocational matters deserve considerably more attention than they have received in the general run of schools. This does not mean, of course, that we should forthwith convert all high schools into vocational schools, in the usual meaning of that term. While concerns in the vocational area are important, the young people also have other concerns. Moreover, a good deal besides occupational knowledge or skill is required to prepare a young person to take his place in the work of the world. But the importance of other topics does not minimize the importance of vocational interests.

VOCATIONAL CHOICES

Even at an early age children give some thought to the kind of work they may be doing when they grow up. When youngsters in early elementary grades are asked, "What are you going to be when you are big?" most of them give an answer, although it may not be very profound and may differ from the responses they would give a month hence.

When children reach adolescent years a large proportion similarly will report the kind of work they hope to enter, although there are some who will be in doubt. Here also, as at earlier levels, many children are likely to show shifting choices from time to time.

UNREALITY OF CHOICE

In their expressions of a choice of occupation, many children name lines of work which they never will be able to enter upon. Various studies have shown that there is rather large dislocation or disproportion between the percentage of young people who aspire to enter certain occupations and the percentages of the adult population gainfully employed in such occupations.

A larger number of youngsters are likely, for example, to voice a preference for one of the professions—engineering, law, medicine, and so on—than can be accommodated. Many express a desire for an occupation which requires abilities and talents they do not possess. Similarly, various studies have found that the number of children who express preferences for occupations in the fields of agriculture, mining, domestic service, skilled and unskilled trades and crafts tends to be smaller than the number of persons who eventually will find their way into these lines of work.

To the extent that such disproportions exist and to the extent that expressions of preference are genuine, a large number of young people face the prospect of having to adjust themselves to a gap between what they aspire to do and what it actually turns out they will do. It is possible that recent conditions and current trends may bring about a change in this situation. Agriculture may become more attractive with the passage of favorable legislation, increasing use of machines, and greater attention to "scientific farming." The growing power of labor organizations and changing working and wage conditions may lend attractiveness to many occupations that call for skilled and unskilled labor. In the meantime changing wage differentials, higher income taxes, and other factors may rob professional, managerial, mercantile, and "white collar" occupations of some of their lure. In some recent studies it actually appears that occupational preferences are more realistic (that is, the percentage of choices falling in the various occupations are more in line with the percentage of the adult population employed in these occupations) than was true in surveys conducted some twenty years ago.

OCCUPATIONAL SATISFACTION

The dislocation between the expressed aspirations of many young people and the realities they subsequently face has its counterpart at the adult level. In studies of job satisfaction it has been found, for example, that a rather large proportion of persons gainfully employed in various occupations would like to have a chance to go into some other line of work if that were possible. This observation, combined with the observations above, indicates, for the past at least, a conspicuous lack of realism on the part of many young people in the pre-vocational stage, and a lack of reconciliation at the adult stage to the lines of work in which a great many persons find themselves. These conditions argue for more attention in education to vocational concerns.

FACTORS INFLUENCING OCCUPATIONAL CHOICES

When high school students name their occupational choices the underlying reasons are many and varied. At one extreme there may be one who chooses on the basis of sound information—gained through reading, or close observation, or actual experience—who has given some thought to his own fitness and has weighed the appeal of this occupation as compared with that of others. At the other extreme is one who names an occupation which to him represents little more than a name; he may have no real information on the duties involved, the remuneration afforded, the personal qualifications required. It is not possible to give a precise estimate of the proportion of young persons who proceed rather blindly, at least for a time, in this fashion; but it is suggestive to note that in one study, about one-fifth the students did not know what duties were to be performed in the active practice of their chosen vocation, and, in another study, about one-seventh professed that they did not know what training was required for the vocation they had chosen.

Factual information is, of course, only one of many considerations involved in vocational choice and preparation for work, yet such information is obviously important. Offhand it might seem a simple matter to remedy this lack through reading, class discussion, and the like. The choices made by students may become somewhat more realistic and soundly grounded when such information is provided but there seem to be definite limits to what can be accomplished through merely an academic approach. In one study (which happens to be at the college level) it was found that the appropriateness of choices made by students after they had attended occupational courses did not show much improvement, whereas students who had attended such courses and had also received more direct personal counseling showed more improvement. In another study, at the high school level, attitudes toward various occupations were deemed to be more realistic after a guidance program of talks, case studies, dramatized interviews, and self-guidance tests.

In a review of studies in this area, one writer found that occupational information which is presented independently of the interests and abilities of students seems to have relatively little influence, whereas information presented in such a manner that the students could relate it to themselves may help them in making a wise vocational choice.

The fact that academic information alone may have relatively little efficacy in making an occupational choice is not, of course, surprising in view of the large variety of other factors involved: personal motives which the young person may formulate to himself in selfish or in altruistic terms and which represent many emotional currents; social conventions which attach varying degrees of prestige to different occupations; family pressures which may move the young person in the intended direction or in the opposite; the accumulated effects of past firsthand experiences and of impressions gained from contact with the activities and the people in different lines of work, and so on.

Influences in any one of these categories may work themselves out in devious ways and some of them may not appear on the surface until a final vocational choice has been made. For example a young man may conceive that he has a call to be a minister and then may change his mind; but he may still turn out to be a "preacher," although perhaps with a different set of doctrines, when eventually he goes into teaching, politics, or some other profession.

The influence of the family on vocational choice is difficult to explain. A boy may, for example, be more inclined toward his father's occupation if the father has been relatively successful, if the occupation is rather high on the occupational scale, if the boy has had some congenial experiences with the work, than if these conditions are reversed. The effects of "work experience" also are likely to be variable: while some young persons profess that they choose a certain line of work because they have had actual experience with it, others may give the same reason for rejecting a given occupation.

One detail that is interesting, although it may not hold for a large number of young people, is that there may be a close relationship between certain types of hobbies and certain lines of vocational interest. In one study it was found, for example, that a considerably larger proportion of students who were interested in engineering, as compared with students who were not, had hobbies related to engineering. This does not necessarily mean, of course, that the hobby determines the vocational interest or vice versa; for the hobby and the interest may spring from a common source.

THE PAST ROLE OF THE HIGH SCHOOL IN VOCATIONAL EDUCATION

When graduates are asked to appraise their high school education, they generally do not look upon the conventional high school program as an important factor in determining their vocational plans or achievements. They look upon it as having contributed to their general culture. Against this it may be said that much that comes under the heading of general culture undoubtedly has practical value in a job—good English usage, to cite only one example.

The fact that graduates take this view of the high school is not surprising, since secondary education in the past was not planned from a vocational point of view, except in a few specialized schools. Even so, many schools with a predominant emphasis on general cultural subjects have made gestures in the direction of vocational training. Witness, for example, the widespread inclusion of courses in typing and stenography, largely patronized by the girls, and of courses in certain forms of manual training, largely utilized by the boys. Courses in the former category have been quite out of proportion to the need for stenographers. Here in the vocational area a situation has prevailed somewhat analogous to one found in the cultural area: hundreds of thousands of students have, for example, taken a year or two of Latin, in a manner quite out of proportion to the world's need for classical scholars on the one hand, or to the personal needs and potentialities of the students on the other.

SOME ISSUES INVOLVED IN WORK EXPERIENCE

So far as the high school program is concerned, the paths toward vocational preparation through the provision of work experience are not well charted. Studies of the development and behavior of adolescent children on the one hand, and reports of educational ventures in this field on the other, do not provide the basis for a generalized set of practical recommendations. This is said with due regard for the many constructive projects and programs which have been undertaken in schools in various parts of the country.

There are, of course, many things pertaining to this matter that we know or can take for granted: As indicated earlier, we can assume that most young people of high school age are more or less interested in vocational matters. On the basis of actual findings in the field of work experience, if not on more general grounds, we can further assume that a large proportion of young people of high school age can acquire a quite realistic and responsible attitude toward the work open for them to do. We can also assume that the facilities need not be limited to the physical plant of the school; for in almost every locality there are resources for vocational education which might be tapped through cooperative relations between the school and the community.

If these three assumptions are correct, the problem of getting something started is mainly one of good practical management. More basic is the problem of defining the objectives to be sought and of gauging the outcomes that can be achieved. Some of these objectives are relatively obvious: we can assume that anything that helps the young person to increase his information, that expands the scope of knowledge and experience underlying his attitudes toward work, that gives him better appreciation of the responsibilities and the human relationships involved in work, and that helps him to gain some of the specific skills required in given occupations will be all to the good. Moreover, it is possible by means of observation, tests, and ratings to get a line on the extent to which objectives such as these have been achieved. Let us say the results are favorable.

So far so good. But further questions arise: To what extent are the outcomes localized in character? To what extent are they or should they be generalized so that more has happened than just a set of specific learnings? To what extent does what has been learned provide something not only temporarily useful but also of more lasting value?

Many practical factors add to the psychological problem of defining objectives and attainable outcomes in education for work. There is the problem of providing what might be called a good psychological sampling. There are thousands of different occupations. Merely to learn the names of all of them, omitting even a little snatch of information about each one, would be a prodigious and rather fruitless task. If we dismiss the possibility of acquainting the student with all lines of work, we still face the question of whether we should try to let him nibble at a rather large number or take large bites of a selected few. There is also the fact that communities differ in the range of nibbles or bites they can offer. Against this we may counter: we should not be concerned with the details and mechanics of this or that occupation but rather with a body of experiences that broadens the student's practical understanding and sharpens his insight with respect to the world of work.

The full educational import of an experience can be gained only if the student is able, sooner or later, to appraise it with a certain amount of detachment and to view it as providing findings to be added to the data that are accumulating in the experiment of life. Students will differ, of course, in the extent to which they obtain an intellectual outcome such as this from work. In a given project, there may be some who do little more than go through the motions, while others will participate in the mechanical details and will also get into the spirit of the thing. Still others will go further and will "integrate" "findings" from this project with other data and thus will become not only more knowing but also wiser with respect to work and people, and with respect to their own abilities, aptitudes, and limitations. Since students differ so much in ability and background, and in the degree to which they already may be concentrating on a chosen line of work, the outcome of any work experience project will vary with different individuals. It is important, however, that the project selected be such that it not only adds to the student's information and practical skills, or provides a pleasant excursion into a new line of work, but also contributes to the judgment and understanding that a student can bring to bear in making his own vocational decisions.

The problem of vocational education also requires, of course, a candid recognition of individual differences. People differ in the talents and aptitudes that various occupations require. This means that the school should make use of all facilities which can aid in sizing up the pupil's qualities and all information which will help to appraise his qualifications in terms of occupational demands.

Apart from the foregoing, we may note that what goes into the making of vocational preparation is not limited to any particular period of life or to undertakings clearly earmarked as "work experience."

The child's vocational preparation begins in infancy. It takes place in part through all the strivings and learnings which are a feature of his growing independence, his increasing capacity for self-help. It takes place through opportunities which he may have from an early age to help pull his own load, to contribute useful services, to earn money, and, through experience, to learn the value of money and the arts of saving and spending money. It takes place by way of his learning to appreciate the value of materials and things and to understand the value of services he and other people can render. It also takes place by way of the countless skills acquired in everyday life.

His attitudes toward vocations, as we have already intimated, are influenced from an early age by the example set by others who represent various occupations, by the realism or the romanticism of the impressions he gains concerning various vocations through his reading, the movies, and radio programs.

The process of preparation for adult work includes all the learnings and adjustments that go into the child's development as a social and emotional creature. In many jobs the characteristics and ways of behaving that constitute what we call the individual's "personality" have an important bearing on his success or failure. Again, his ability and willingness to take responsibility, willingness, if need be, to do more than his just share, his appreciation of the bearing that his own work and workmanship have in the scheme of things and upon the well-being of others, may have a crucial effect on his enjoyment of the job and on his success.

THE CULTURAL AREAS

In the foregoing sections have been considered some of the personal concerns and practical interests that must be taken into account in the educational program at the adolescent level. When it is recommended that these matters be given more attention it is not implied that secondary education should abandon the more strictly intellectual and cultural areas. To do so would be a denial of the adolescent's continuing capacity for intellectual growth, his ability during this period to expand his intellectual horizons, to find new outlets for his curiosity, to add to his general information and his knowledge in specialized fields. In a program geared to child development we would question the procedure and relative amount of emphasis, but certainly not many of the purposes underlying the traditional academic program.

OVERLAP OF THE "PRACTICAL" AND THE "CULTURAL"

In passing it may be pointed out that the approaches which were distinguished above, the personal and practical on the one hand, and the intellectual and cultural on the other, merge into each other. Vocational education, for example, strikes a practical note and it also touches upon personal concerns. But if it is soundly educational it is also genuinely cultural: it contributes to the person's enlightenment and offers more than snatches of information or bits of personal advice. Indeed, a study of vocations that is initiated by practical and personal considerations might readily in time cover much of the material commonly found in separate "subjects," such as economics, political science, sociology, and the pure sciences.

Other personal or practical areas discussed in earlier sections—physical growth, heterosexual adjustments, getting along with others, and the like—if pursued to any extent similarly lead into the substance of many branches of the social and natural sciences as well as of literature and the arts.

FROM SOD TO SYMBOLS

This process of moving from the concrete to the more abstract, from the practical to the theoretical, from the specific case to a more general rule can occur in projects at school as well as in the private undertakings of individuals in everyday life. An adult novice at gardening at first fertilizes, tills, plants, and sprays according to specific rules of the book. Then he derives out of his experience and reading certain general principles that apply to the routines of gardening. At the first level, these principles function as a form of "common sense." He is able to put them into practice but may not be able to formulate them into words of his own.

This is about as far as many persons choose to go, or have the ability to do so, in gardening as in other undertakings. At more advanced levels of intellectualization, the gardener (and the teacher of students, or any other person one might choose for illustration) becomes able not only to apply principles in practice but also to improvise, to have good hunches about ways of solving problems not literally covered in his books, to devise means of testing his hunches, to gather pertinent data. He may go on to formulate new hypotheses, to apply and to report methods of experimentation that verify, or call into question, or supplement the lore in his field of study.

THE LURE OF IDEAS

In any given high school class students will vary in the extent to which they have moved from handling concrete things to the handling of ideas. Here is a student, perhaps a beginner, perhaps a veteran "slow learner," whose mind cannot go beyond the sod—the obviously concrete, the practical and literal fact. Here is another, abler or perhaps more strongly motivated, whose mind has leaped beyond the sod to the manipulation of symbols.

But all students with a modicum of intelligence have the ability, varying in degree, to go beyond the first level into the level of ideas. Moreover, all students within the normal range of intelligence have a potential of intellectual curiosity, a potential interest in ideas *as such* rather than simply as tools for solving emotional problems or for meeting the ulterior demands of everyday life.

ENTER THE SUBJECT MATTER FIELDS

When we seek in the high school program to supply ideas and enlightenment, whether to satisfy intellectual curiosity or to meet practical demands, we must, of course, draw upon our cultural heritage. We open the door to much if not all of the content that conventionally has been taught in the form of separate subject matter courses. We do not, however, necessarily have to continue the form of these courses. Nor should we proceed forthwith to throw them out. A certain conventional course in mathematics, literature, or history may be utterly unsuited both to the interests and to the capabilities of a number of students. Yet the same course may provide the most convenient and fruitful means of supplying just the right intellectual meat for certain other students. The merits of a "subject matter" approach as against, say, an approach by way of "areas of personal experience" cannot be determined simply by an all-or-none acceptance of one and a rejection of the other. The answer depends not only on the purposes to be served but also on the intellectual background of the students.

Having granted this we can also recognize that there have been grave shortcomings in the conventional subject matter approach. Great numbers of students, bright as well as dull, who have "taken" courses have succeeded only in acquiring fragments of information, without any substantial competence in the narrow subject matter area, let alone an increase in their general understanding of things. Along with this, large numbers of students have had many experiences on the negative side. It is frustrating, to say the least, to memorize one's way through the theorems of geometry without having any real grasp of their meaning, or to repeat dutifully in a literature class that a certain writer was a romanticist, another a realist, another full of "whimsy," without having a clear notion of why these labels are applied, or to go through the motions of any course while feeling out of touch or unable to pull things together in a meaningful way.

THE DEVELOPMENTAL APPROACH

While there are many reasons behind a state of affairs such as this, there is one in particular that is outstanding. Much of the failure of courses to take hold and add something significant to the intellectual life of the student stems from failure to make a developmental approach to the learner. A logical presentation of subject matter that is the fruit of generations of scholarship will often be quite out of step with the psychological processes of learning. Such an approach requires that the student "skip" several grades, so to speak, and work down from the top rather than upward from the bottom.

This is notably illustrated by the older methods of teaching languages. These methods have been sharply out of line with the process of language development in the life of the individual. They have also been out of line with the way in which a person goes about acquiring a new language in a foreign country or in a bilingual community. By emphasis on grammatical form especially in the classics we have tried to catapult the beginner into the language usage of the finished scholar. If we insisted on a similar approach for a child who is just beginning to talk he would be seriously handicapped in his language development and he might also turn out to be a nervous wreck. Similarly, the same is true in the learning of a new language in everyday life. When a beginner in English, poised to take a trip, says, "Duh bus, when do she move?" he is not being very grammatical, but everyone knows what he means. In his own good time this beginner, like the child, will improve his usage, but it is better now to let him make the bus on poor English.

This same tendency to require the beginner to leap at one bound to the interests and techniques of the scholar, rather than to lead him on from his own level, has appeared to a greater or lesser degree in practically all subject matter areas. A student who starts the study of botany, expecting to add to his knowledge about plants, may fail to see any connection between this interest and a prolonged study of cell structure and other specialized details, crucial as these eventually will be to an understanding of botany. Similarly in the field of zoology. Initiation into this subject through cell structure, mitosis, progression from simpler to higher forms of animal life, and the like, is far removed from the knowledge and interest with respect to animal life that many students bring to the subject.

The foregoing implies that we should give more stress to the psychological than to the logical approach in introducing students to new subject matter. The steps taken to achieve this will necessarily vary somewhat in different school situations and in connection with different areas of subject matter. If a course serves a purpose which the student appreciates and wishes to accomplish, the steps may simply involve adaptations in methods of teaching within the conventional framework of the course. In other situations the procedure may require a breaking down of conventional subject matter boundaries. Much that goes into the study of biology might prove to be much more significant if it were taught not in a separate course but as an integrated feature of a project dealing with problems of physical growth and health that touch upon the personal concerns of many students. Much that goes into the subject matter of "civics," political science, and the like, could take on greater significance if integrated with problems related to student self-government, or with a study of the community that involves features touching upon the personal lives of the students.

Similar possibilities for making a functional approach, as distinguished from an academic, can be found in connection with most of the subject matter areas which conventionally have been tied up in little bundles known as courses. The purpose of this approach is neither to break down subject matter boundaries on the theory that this *per se* is good, nor to sneak conventional subject matter into the program through a side door on the theory that the halo of scholarship must be preserved. Rather, the aim is to promote effective learning. For this reason, even if the high schools make increasing use of a functional route to subject matter fields, there should still be provision for students who are able to press into specialized areas of study and who do not continually need the incentive of an obvious practical or personal problem.

THE MORAL SPHERE

The subject of morals was discussed earlier from a developmental point of view. We noted that as children move toward and through adolescence they increasingly grasp the moral concepts and accept the standards prevailing at the adult level. The problem of morality is, obviously, much broader than this. It involves not simply the question of how and when young people accept moral principles but also the question of what these principles, and their interpretation, should be. Therefore we raise the subject of morals again to mention some educational implications of certain hopes and fears that persist in the minds of all thinking people.

We have had a devastating war in which right has been put to the test of might. While responsibility for this war rests directly upon those who provoked it, it also rests indirectly upon all persons who had the capacity to think and to feel. There is a similar responsibility upon all to prevent a future catastrophe. Scientific developments during the war have provided man with a staggering increase in power over matter and space. Unless man can also increase his moral strength—his grasp of ideas and acceptance of attitudes that make for good will—this power will be a fearful thing.

The new developments in science and technology will no doubt jolt the world at large into a greater concern about moral issues. New prophets may arise. Strong leaders may appear. New insights into ways of promoting an intelligent moral orientation in young people undoubtedly will emerge. Here no attempt will be made to prescribe the turns moral education should take or to raise a new beacon of morality. We do venture, however, to make some observations and recommendations.

The first observation is that we need to take stock of the theories underlying the moral training we give to children. The moral suasion now brought to bear is full of confusion and hypocrisy. What with conflicting and contradictory precepts and examples, it is a wonder that children learn as well as they do to assume the moral façade of their elders.

Much of this confusion stems from what might be called "selective morality." Many forms of conduct are regarded as immoral if they take one specific turn, but are not so regarded if they take another form. If a man directly steals another's money, he is condemned. If he steals indirectly by taking advantage of the other's ignorance and selling him inferior goods, he may remain quite a respectable person. Again, in some quarters, there are persons who regard smoking as immoral, on the theory that it is injurious to health, but who do not stop to think that on the same grounds a person who selects a poor diet, or who eats more than he should, or reads late into the night when he is in need of sleep, is quite as immoral as the smoker.

This tendency to be selective may go so far as to belie the very premise on which a moral stand is taken. A man may lash out against certain personal habits on the theory that Christian ethics are involved, and then tolerate and even encourage hatreds and prejudices that go counter to the very essence of Christian morality.

Another feature that makes for confusion in the moral training of children is the widespread tendency of adults to consider the superficial aspects of behavior, the externals of conduct, rather than the underlying motives. Hundreds of thousands of persons have joined, for example, in crusades against alcoholic beverages, but only a handful have recognized that the practice of drinking too much is not simply an external habit but often has its roots in personality disorders. In the field of sex morality, likewise, the training which many children receive deals with certain acts that are prohibited rather than with positive attitudes and motives that should come into play in a person's everyday dealings with his spouse and family.

The need for establishing a consistent and honest theory of morals is apparent also in connection with the defining of moral responsibility. In this area the concepts of the average person—who determines to a large degree the moral climate in which the child grows—have been on a primitive level. While science and technology have broken old barriers of time and space, so that the concerns and the good or evil designs of people ten thousand miles away have a bearing upon our everyday lives, we have tended to continue to live in moral isolation. The primitive man could afford such isolation. He had little to hope for or fear beyond the boundaries of his small physical world. It now obviously is not enough to take moral responsibility for things that lie close at hand—to see that the house and neighborhood are protected against local fires when fire may descend from a thousand miles away, or to see that the behavior of children is not perverted by bad influences in the immediate community when the community from which harm may come extends to the ends of the earth. Again, the demands of moral responsibility are not met merely by helping to relieve suffering that lies within eye-shot, for tomorrow the blame for the sufferings of a distant people may be laid at our door.

Implicit in the foregoing is a further emphasis, namely, that education in the moral sphere is not something that is optional but something that is very urgent. It should not be accepted merely as another new note that school people have chosen to strike.

This does not mean that we should add to the curriculum a new course on ethics and morals. A formal project such as this quite probably would defeat its own purpose. The major requirement is that teachers, along with all other thinking adults, incorporate into their own understanding a realistic and consistent conception of morality and accept the necessity for such a conception not as a pious conviction but as something imbedded in their everyday thought processes. When ideas and attitudes are so intrenched they will be communicated to children in the natural flow of words and deeds that go into the everyday business of living. It is by this means primarily that the moral climate in which a child grows is established and it is from this climate, more than from pointed homilies and admonitions, that most of a child's moral education is derived.

Acceptance of the propositions above may not revolutionize moral conduct. The observation that the spirit is willing but the flesh is weak will no doubt continue to hold true, whether man construes his moral obligations in narrow terms or universal terms. There are, however, three points in conclusion. First is the point that what is urged above under the heading of morals can all be translated in terms of intelligent self-interest. Self-interest carried to its psychological conclusions leads to interest in and concern for the other fellow.

Second is the fact, from the developmental angle, that the ability to be concerned about the other fellow has its origins early in the child's life. As emphasized in previous chapters, children from an early age acquire the disposition to give as well as to receive, to sympathize as well as to inflict harm, to bestow affection as well as to receive it. When we seek to broaden the moral commitments of the growing child we are not imposing something alien or new. We are building upon potentialities already there.

Third is the fact that these broader commitments do not represent anything new in the concept of morality. True enough, morals have fallen into sectarian hands, and have been subject to selective, dishonest, and inconsistent interpretations. But an ancient and all-inclusive concept lies at the heart of the moral tradition that has permeated our own culture and the culture of a large portion of the world. The second commandment is like unto the first: "Thou shalt love thy neighbor as thyself." Perhaps no person will ever be able fully to abide by this commandment. But it points the way for society and for the individual, whether the motive behind his morals be fear of catastrophe, or practical self-interest, or devotion to a higher cause.

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CHAPTER II

PRINCIPLES OF CHILD DEVELOPMENT AS APPLIED TO THE CURRICULUM

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DEVELOPMENT DURING INFANCY

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CHAPTER VI

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